

Learning Virtual Reality Developing Immersive Experiences And Applications For Desktop Web And Le

THANK YOU UNCONDITIONALLY MUCH FOR DOWNLOADING **LEARNING VIRTUAL REALITY DEVELOPING IMMERSIVE EXPERIENCES AND APPLICATIONS FOR DESKTOP WEB AND LE**.MOST LIKELY YOU HAVE KNOWLEDGE THAT, PEOPLE HAVE SEE NUMEROUS PERIOD FOR THEIR FAVORITE BOOKS TAKING INTO CONSIDERATION THIS **LEARNING VIRTUAL REALITY DEVELOPING IMMERSIVE EXPERIENCES AND APPLICATIONS FOR DESKTOP WEB AND LE**, BUT END OCCURRING IN HARMFUL DOWNLOADS.

RATHER THAN ENJOYING A FINE EBOOK IN THE SAME WAY AS A MUG OF COFFEE IN THE AFTERNOON, OTHERWISE THEY JUGGLED TAKING INTO CONSIDERATION SOME HARMFUL VIRUS INSIDE THEIR COMPUTER. **LEARNING VIRTUAL REALITY DEVELOPING IMMERSIVE EXPERIENCES AND APPLICATIONS FOR DESKTOP WEB AND LE** IS FRIENDLY IN OUR DIGITAL LIBRARY AN ONLINE ENTRY TO IT IS SET AS PUBLIC CONSEQUENTLY YOU CAN DOWNLOAD IT INSTANTLY. OUR DIGITAL LIBRARY SAVES IN COMPLEX COUNTRIES, ALLOWING YOU TO ACQUIRE THE MOST LESS LATENCY TIMES TO DOWNLOAD ANY OF OUR BOOKS IN THE SAME WAY AS THIS ONE. MERELY SAID, THE **LEARNING VIRTUAL REALITY DEVELOPING IMMERSIVE EXPERIENCES AND APPLICATIONS FOR DESKTOP WEB AND LE** IS UNIVERSALLY COMPATIBLE SUBSEQUENT TO ANY DEVICES TO READ.

EXPERIENCE ON DEMAND: WHAT VIRTUAL REALITY IS, HOW IT WORKS, AND WHAT IT CAN DO JEREMY BAILENSON 2018-01-30 “IF YOU WANT TO UNDERSTAND THE MOST IMMERSIVE NEW COMMUNICATIONS MEDIUM TO COME ALONG SINCE CINEMA... I’D SUGGEST STARTING WITH MR. BAILENSON’S [BOOK].” —WALL STREET JOURNAL VIRTUAL REALITY IS ABLE TO EFFECTIVELY BLUR THE LINE BETWEEN REALITY AND ILLUSION, GRANTING US ACCESS TO ANY EXPERIENCE IMAGINABLE. THESE EXPERIENCES, ONES THAT THE BRAIN IS CONVINCED ARE REAL, WILL SOON BE AVAILABLE EVERYWHERE. IN *EXPERIENCE ON DEMAND*, JEREMY BAILENSON DRAWS UPON TWO DECADES SPENT RESEARCHING THE PSYCHOLOGICAL EFFECTS OF VR TO HELP READERS UNDERSTAND ITS UPSIDES AND POSSIBLE DOWNSIDES. HE OFFERS EXPERT GUIDELINES FOR INTERACTING WITH VR, AND DESCRIBES THE PROFOUND WAYS THIS TECHNOLOGY CAN BE PUT TO USE TO HONE OUR PERFORMANCE, HELP US RECOVER FROM TRAUMA, IMPROVE OUR LEARNING, AND EVEN ENHANCE OUR EMPATHIC AND IMAGINATIVE CAPACITIES SO THAT WE TREAT OTHERS AND OURSELVES BETTER.

AUGMENTED AND MIXED REALITY FOR COMMUNITIES JOSHUA A. FISHER 2021-07-14 USING MIXED AND AUGMENTED REALITY IN COMMUNITIES IS AN EMERGING MEDIA PRACTICE THAT IS RESHAPING HOW WE INTERACT WITH OUR CITIES AND NEIGHBORS. FROM THE POLITICS OF CITY HALL TO CROSSWALKS AND PLAYGROUNDS, MIXED AND AUGMENTED REALITY WILL OFFER A DIVERSE RANGE OF NEW WAYS TO INTERACT WITH OUR COMMUNITIES. IN 2016, APPS FOR AUGMENTED REALITY POLITICS BEGAN TO APPEAR IN APP STORES. SIMILARLY, THE BLOCKBUSTER SUCCESS OF POKÉMON GO ILLUSTRATED HOW EVEN FORGOTTEN STREET CORNERS CAN BECOME A MAGICAL SPACE FOR PLAY. IN 2019, A COURT CASE IN MILWAUKEE, WISCONSIN, EXTENDED FIRST AMENDMENT RIGHTS TO AUGMENTED REALITY. FOR ALL THE GOOD THAT THESE EMERGING MEDIA PROVIDE, THERE WILL AND HAVE BEEN CONSEQUENCES. AUGMENTED AND MIXED REALITY FOR COMMUNITIES WILL HELP STUDENTS AND PRACTITIONERS NAVIGATE THE ETHICAL DESIGN AND DEVELOPMENT OF THESE KINDS OF EXPERIENCES TO TRANSFORM THEIR CITIES. AS ONE OF THE FIRST BOOKS OF ITS KIND, EACH CHAPTER IN THE BOOK PREPARES READERS TO CONTRIBUTE TO THE AUGMENTED CITY. BY PROVIDING INSIGHT INTO HOW THESE EMERGING MEDIA WORK, THE BOOK SEEKS TO DEMOCRATIZE THE AUGMENTED AND MIXED REALITY SPACE. AUTHORS WITHIN THIS VOLUME REPRESENT SOME OF THE LEADING SCHOLARS AND PRACTITIONERS WORKING IN THE AUGMENTED AND MIXED REALITY SPACE FOR CIVIC MEDIA, CULTURAL HERITAGE, CIVIC GAMES, ETHICAL DESIGN, AND SOCIAL JUSTICE. READERS WILL FIND PRACTICAL INSIGHTS FOR THE DESIGN AND DEVELOPMENT TO CREATE THEIR OWN COMPELLING EXPERIENCES. TEACHERS WILL FIND THAT THE TEXT PROVIDES IN-DEPTH, CRITICAL ANALYSES FOR THOUGHT-PROVOKING CLASSROOM DISCUSSIONS.

VIRTUAL REALITY BLUEPRINTS CHARLES PALMER 2018-02-27 JOIN THE VIRTUAL REALITY REVOLUTION BY CREATING IMMERSIVE 3D GAMES AND APPLICATIONS WITH CARDBOARD VR, GEAR VR, OCVLUSVR, AND HTC VIVE KEY FEATURES DEVELOP ROBUST, IMMERSIVE VR EXPERIENCES THAT ARE EASY ON THE EYE. CODE 3D GAMES AND APPLICATIONS USING UNITY 3D GAME ENGINE. LEARN THE BASIC PRINCIPLES OF VIRTUAL REALITY APPLICATIONS BOOK DESCRIPTION ARE YOU NEW TO VIRTUAL REALITY? DO YOU WANT TO CREATE EXCITING INTERACTIVE VR APPLICATIONS? THERE’S NO NEED TO BE DAUNTED BY THE THOUGHT OF CREATING INTERACTIVE VR APPLICATIONS, IT’S MUCH EASIER THAN YOU THINK WITH THIS HANDS-ON, PROJECT-BASED GUIDE THAT WILL TAKE YOU THROUGH VR DEVELOPMENT ESSENTIALS FOR DESKTOP AND MOBILE-BASED GAMES AND APPLICATIONS. EXPLORE THE THREE TOP PLATFORMS-- CARDBOARD VR, GEAR VR, AND OCVLUSVR --TO DESIGN IMMERSIVE EXPERIENCES FROM SCRATCH. YOU’LL START BY UNDERSTANDING THE SCIENCE-FICTION ROOTS OF VIRTUAL REALITY AND THEN BUILD YOUR FIRST VR EXPERIENCE USING CARDBOARD VR. YOU’LL THEN DELVE INTO USER INTERACTIONS IN VIRTUAL SPACE FOR THE GOOGLE CARDBOARD THEN MOVE ON TO CREATING A VIRTUAL GALLERY WITH GEAR VR. THEN YOU WILL LEARN ALL ABOUT VIRTUAL MOVEMENTS, STATE MACHINES, AND SPAWNING WHILE YOU SHOOT ZOMBIES IN THE OCVLUS RIFT HEADSET. NEXT, YOU’LL CONSTRUCT A CARNIVAL MIDWAY, COMPLETE WITH TWO COMMON GAMES TO ENTERTAIN PLAYERS. ALONG THE WAY, YOU WILL EXPLORE THE BEST PRACTICES FOR VR DEVELOPMENT, REVIEW GAME DESIGN TIPS, DISCUSS METHODS FOR COMBATING MOTION SICKNESS AND IDENTIFY ALTERNATE USES FOR VR APPLICATIONS WHAT YOU WILL LEARN USE UNITY ASSETS TO CREATE OBJECT SIMULATION. IMPLEMENT SIMPLE TOUCH CONTROLS IN YOUR APPLICATION. APPLY ARTIFICIAL INTELLIGENCE TO ACHIEVE PLAYER AND CHARACTER INTERACTION. ADD SCRIPTS FOR MOVEMENT, TRACKING, GRASPING, AND SPAWNING. CREATE ANIMATED WALKTHROUGHS, USE 360-DEGREE MEDIA, AND BUILD ENGAGING VR EXPERIENCES. DEPLOY YOUR GAMES ON MULTIPLE VR PLATFORMS. WHO THIS BOOK IS FOR IF YOU ARE A GAME DEVELOPER AND A VR ENTHUSIAST NOW LOOKING TO GET STUCK INTO THE VR APP DEVELOPMENT PROCESS BY CREATING VR APPS FOR DIFFERENT PLATFORMS, THEN THIS IS THE BOOK FOR YOU. FAMILIARITY WITH THE UNITY GAME ENGINE AND THE C# LANGUAGE IS KEY TO GETTING THE MOST FROM THIS BOOK.

STUDENT-FOCUSED LEARNING DARREL W. STAAT 2020 THIS BOOK GIVES EDUCATORS A VIEW INTO THE KINDS OF METHODS TO USE IN THE TWENTY-FIRST CENTURY. HIGHER EDUCATION WILL NEED TO MAKE A TRANSITION FROM WHAT IS ACCEPTED PRACTICE TODAY, TO WHAT WILL BECOME SUCCESSFUL METHODS IN THE NEAR FUTURE. THE NEW EMPHASIS PLACES THE STUDENT IN THE CENTER OF THE EDUCATIONAL PROCESS.

AUGMENTED REALITY DIETER SCHMALSTIEG 2016-06-01 AUGMENTED REALITY (AR) IS ONE OF TODAY’S MOST FASCINATING AND FUTURE-ORIENTED AREAS OF COMPUTER SCIENCE AND TECHNOLOGY. BY OVERLAYING COMPUTER-GENERATED INFORMATION ON VIEWS OF THE REAL WORLD, AR AMPLIFIES HUMAN PERCEPTION AND COGNITION IN REMARKABLE NEW WAYS. DO YOU LIKE THE VIRTUAL FIRST-DOWN LINE IN FOOTBALL GAMES ON TV? THAT’S AR. AND AR APPS ARE RAPIDLY COMING TO BILLIONS OF SMARTPHONES, TOO. WORKING IN AR REQUIRES KNOWLEDGE FROM DIVERSE DISCIPLINES, INCLUDING COMPUTER VISION, COMPUTER GRAPHICS, AND HUMAN-COMPUTER INTERACTION (HCI). AUGMENTED REALITY: PRINCIPLES AND PRACTICE INTEGRATES ALL THIS KNOWLEDGE INTO A SINGLE-SOURCE REFERENCE, PRESENTING THE MOST SIGNIFICANT AR WORK WITH SCRUPULOUS ACCURACY. DIETER SCHMALSTIEG, A PIONEER OF BOTH AR FOUNDATION AND APPLICATION, IS DRAWING FROM HIS TWO DECADES OF AR EXPERIENCE TO CLEARLY PRESENT THE FIELD. TOGETHER WITH MOBILE AR PIONEER AND RESEARCH COLLEAGUE TOBIAS HILLERER, THE AUTHORS ADDRESS ALL ASPECTS OF THE FIELD, ILLUMINATING AR FROM BOTH TECHNICAL AND HCI PERSPECTIVES. THE AUTHORS REVIEW AR’S TECHNICAL FOUNDATIONS, INCLUDING DISPLAY AND TRACKING TECHNOLOGIES, SHOW HOW AR EMERGES FROM THE SYMBIOSIS OF COMPUTER VISION AND COMPUTER GRAPHICS, INTRODUCE AR-SPECIFIC VISUALIZATION AND 3D INTERACTION TECHNIQUES, AND SHOWCASE APPLICATIONS FROM DIVERSE INDUSTRIES. THEY CONCLUDE WITH AN OUTLOOK ON TRENDS AND EMERGING TECHNOLOGIES, INCLUDING PRACTICAL POINTERS FOR BEGINNING PRACTITIONERS. THIS BOOK IS AN INDISPENSABLE RESOURCE FOR EVERYONE INTERESTED IN AR, INCLUDING SOFTWARE AND APP DEVELOPERS, ENGINEERS, STUDENTS AND INSTRUCTORS, RESEARCHERS, AND HOBBYISTS. FOR USE IN EDUCATIONAL ENVIRONMENTS, THE AUTHORS WILL PROVIDE A COMPANION WEBSITE CONTAINING SLIDES, CODE EXAMPLES, AND OTHER SOURCE MATERIALS.

AUGMENTED REALITY WITH UNITY AR FOUNDATION JONATHAN LINOWES 2021-08-16 EXPLORE THE WORLD OF AUGMENTED REALITY DEVELOPMENT WITH THE LATEST FEATURES OF UNITY AND STEP-BY-STEP TUTORIAL-STYLE EXAMPLES WITH EASY-TO-UNDERSTAND EXPLANATIONS KEY FEATURES BUILD FUNCTIONAL AND INTERACTIVE AUGMENTED REALITY APPLICATIONS USING THE UNITY 3D GAME ENGINE LEARN TO USE UNITY’S XR AND AR COMPONENTS, INCLUDING AR FOUNDATION AND OTHER STANDARD UNITY FEATURES IMPLEMENT COMMON AR APPLICATION USER EXPERIENCES NEEDED TO BUILD ENGAGING APPLICATIONS BOOK DESCRIPTION AUGMENTED REALITY APPLICATIONS ALLOW PEOPLE TO INTERACT MEANINGFULLY WITH THE REAL WORLD THROUGH DIGITALLY ENHANCED CONTENT. THE BOOK STARTS BY HELPING YOU SET UP FOR AR DEVELOPMENT, INSTALLING THE UNITY 3D GAME ENGINE, REQUIRED PACKAGES, AND OTHER TOOLS TO DEVELOP FOR ANDROID (ARCORE) AND/OR IOS (ARKIT) MOBILE DEVICES. THEN WE JUMP RIGHT INTO THE BUILDING AND RUNNING AR SCENES, LEARNING ABOUT AR FOUNDATION COMPONENTS, OTHER UNITY FEATURES, C# CODING, TROUBLESHOOTING, AND TESTING. WE CREATE A FRAMEWORK FOR BUILDING AR APPLICATIONS THAT MANAGES USER INTERACTION MODES, USER INTERFACE PANELS, AND AR ONBOARDING GRAPHICS THAT YOU WILL SAVE AS A TEMPLATE FOR REUSE IN OTHER PROJECTS IN THIS BOOK. USING THIS FRAMEWORK, YOU WILL BUILD MULTIPLE PROJECTS, STARTING WITH A VIRTUAL PHOTO GALLERY THAT LETS YOU PLACE YOUR FAVORITE FRAMED PHOTOS ON YOUR REAL-WORLD WALLS, AND INTERACTIVELY EDIT THESE VIRTUAL OBJECTS. OTHER PROJECTS INCLUDE AN EDUCATIONAL IMAGE TRACKING APP FOR EXPLORING THE SOLAR SYSTEM, AND A FUN SELFIE APP TO PUT MASKS AND ACCESSORIES ON YOUR FACE. THE BOOK PROVIDES PRACTICAL ADVICE AND BEST PRACTICES THAT WILL HAVE YOU UP AND RUNNING QUICKLY. BY THE END OF THIS AR BOOK, YOU WILL BE ABLE TO BUILD YOUR OWN AR APPLICATIONS, ENGAGING YOUR USERS IN NEW AND INNOVATIVE WAYS. WHAT YOU WILL LEARN DISCOVER UNITY ENGINE FEATURES FOR BUILDING AR APPLICATIONS AND GAMES GET UP TO SPEED WITH UNITY AR FOUNDATION COMPONENTS AND THE UNITY API BUILD A VARIETY OF AR PROJECTS USING BEST PRACTICES AND IMPORTANT AR USER EXPERIENCES UNDERSTAND THE CORE CONCEPTS OF AUGMENTED REALITY TECHNOLOGY AND DEVELOPMENT FOR REAL-WORLD PROJECTS SET UP YOUR SYSTEM FOR AR DEVELOPMENT AND LEARN TO IMPROVE YOUR DEVELOPMENT WORKFLOW CREATE AN AR USER FRAMEWORK WITH INTERACTION MODES AND UI, SAVED AS A TEMPLATE FOR NEW PROJECTS WHO THIS BOOK IS FOR THIS AUGMENTED REALITY BOOK IS FOR GAME DEVELOPERS INTERESTED IN ADDING AR CAPABILITIES TO THEIR GAMES AND APPS. THE BOOK ASSUMES BEGINNER-LEVEL KNOWLEDGE OF UNITY DEVELOPMENT AND C# PROGRAMMING, FAMILIARITY WITH 3D GRAPHICS, AND EXPERIENCE IN USING EXISTING AR APPLICATIONS. BEGINNER-LEVEL EXPERIENCE IN DEVELOPING MOBILE APPLICATIONS WILL BE HELPFUL TO GET THE MOST OUT OF THIS AR UNITY BOOK.

GETTING STARTED WITH REACT VR JOHN GWINNER 2017-11-30 CREATE AMAZING 360 AND VIRTUAL REALITY CONTENT THAT RUNS DIRECTLY IN YOUR BROWSERS WITH JAVASCRIPT AND REACT VR 2.0 ABOUT THIS BOOK A PRACTICAL GUIDE TO DEVELOPING VIRTUAL REALITY EXPERIENCES TARGETING WEB AND MOBILE BROWSERS CREATE CUSTOMIZED 3D GRAPHICS FOR YOUR VIRTUAL REALITY EXPERIENCES WITH THREEJS EXPLORE THE REACT VR LIBRARY TO CREATE OBJECTS THAT SEEM REAL AND SEE HOW THEY MOVE IN THE VIRTUAL WORLD IMPORT FREE MODELS INTO VR AND INCLUDE THOSE IN YOUR CODE WHO THIS BOOK IS FOR THIS BOOK IS FOR WEB DEVELOPERS WHO WANT TO USE THEIR EXISTING SKILL SET OF HTML, CSS, AND JAVASCRIPT TO CREATE VIRTUAL REALITY EXPERIENCES. WHAT YOU WILL LEARN USE BLENDER 2.79 TO MAKE VIRTUAL REALITY OBJECTS FOR WEB VR. IMPORT FREE MODELS INTO VR AND HOW TO INCLUDE THOSE IN YOUR CODE BUILD A VIRTUAL MUSEUM WITH INTERACTIVE ART PIECES CREATE YOUR FIRST VR APP AND CUSTOMIZING IT BUILD ANIMATIONS BY PROCEDURALLY CHANGING AN OBJECT’S POSITION, USING TIMERS AND ANIMATED APIS INCORPORATE REACT NATIVE CODE AND JAVASCRIPT CODE IN YOUR VR WORLD IN DETAIL THIS BOOK TAKES YOU ON A JOURNEY TO CREATE INTUITIVE AND INTERACTIVE VIRTUAL REALITY EXPERIENCES BY CREATING YOUR FIRST VR APPLICATION USING REACT VR 2.0.0. IT STARTS BY GETTING YOU UP TO SPEED WITH VIRTUAL REALITY (VR) AND REACT VR COMPONENTS. IT TEACHES YOU WHAT VIRTUAL REALITY (VR) REALLY IS, WHY IT WORKS, HOW TO DESCRIBE 3D OBJECTS, THE INSTALLATION OF NODEJS (VERSION 9.2.0) AND WEBVR BROWSER. YOU WILL LEARN 3D POLYGON MODELING, TEXTURING, ANIMATING VIRTUAL OBJECTS AND ADDING SOUND TO YOUR VR WORLD. YOU WILL ALSO DISCOVER WAYS TO EXTEND REACT VR WITH NEW FEATURES AND NATIVE THREEJS. YOU WILL LEARN HOW TO INCLUDE EXISTING HIGH-PERFORMANCE WEB CODE INTO YOUR VR APP. THIS BOOK WILL ALSO TAKE YOU THROUGH UPGRADING AND PUBLISHING YOUR APP. BY THE END OF THIS BOOK, YOU’LL HAVE A DEEP KNOWLEDGE OF VIRTUAL REALITY AND A FULL-FLEDGED WORKING VR APP TO ADD TO YOUR PROFILE! STYLE AND APPROACH A STEP-BY-STEP PRACTICAL GUIDE TO HELP READERS BUILD THEIR FIRST VR APPLICATION.

UNREAL ENGINE VIRTUAL REALITY QUICK START GUIDE JESSICA PLOWMAN 2019-02-28

VIRTUAL REALITY FOR BEGINNERS! MURRAY RAMIREZ 2016-11-26 VIRTUAL REALITY FOR BEGINNERS! HOW TO UNDERSTAND, USE &

CREATE WITH VR ARE YOU READY TO LEARN ALL ABOUT VR? IF SO YOU’VE COME TO THE RIGHT PLACE... HERE’S A PREVIEW OF WHAT THIS VIRTUAL REALITY BOOK CONTAINS... AN INTRODUCTION TO VIRTUAL REALITY VR THROUGH TIME - THE HISTORY AND GROWTH OF VIRTUAL REALITY GETTING STARTED WITH VR - WHAT YOU’LL NEED TO GET GOING THE SCIENCE OF VR TRENDS IN THE VR INDUSTRY GOOGLE CARDBOARD EXPLORED SONY PLAYSTATION VR EXPLORED HTC VIVE EXPLORED OCVLUS RIFT EXPLORED SAMSUNG GEAR VR EXPLORED BONUS: GOOGLE DAYDREAM VIEW EXPLORED VR AND BEYOND! 2016+ VERDICT THE NEXT BIG THING AND MUCH, MUCH MORE! DOWNLOAD YOUR COPY NOW AND GET STARTED NOW!

PRACTICAL AUGMENTED REALITY STEVE AUKSTAKALNIS 2016-09-08 THE MOST COMPREHENSIVE AND UP-TO-DATE GUIDE TO THE TECHNOLOGIES, APPLICATIONS AND HUMAN FACTORS CONSIDERATIONS OF AUGMENTED REALITY (AR) AND VIRTUAL REALITY (VR) SYSTEMS AND WEARABLE COMPUTING DEVICES. PRACTICAL AUGMENTED REALITY IS IDEAL FOR PRACTITIONERS AND STUDENTS CONCERNED WITH ANY APPLICATION, FROM GAMING TO MEDICINE. IT BRINGS TOGETHER COMPREHENSIVE COVERAGE OF BOTH THEORY AND PRACTICE, EMPHASIZING LEADING-EDGE DISPLAYS, SENSORS, AND DIY TOOLS THAT ARE ALREADY AVAILABLE COMMERCIALY OR WILL BE SOON. BEGINNING WITH A FOREWORD BY NASA RESEARCH SCIENTIST VICTOR LUO, THIS GUIDE BEGINS BY EXPLAINING THE MECHANICS OF HUMAN SIGHT, HEARING AND TOUCH, SHOWING HOW THESE PERCEPTUAL MECHANISMS (AND THEIR PERFORMANCE RANGES) DIRECTLY DICTATE THE DESIGN AND USE OF WEARABLE DISPLAYS, 3-D AUDIO SYSTEMS, AND TACTILE/FORCE FEEDBACK DEVICES. STEVE AUKSTAKALNIS PRESENTS REVEALING CASE STUDIES OF REAL-WORLD APPLICATIONS FROM GAMING, ENTERTAINMENT, SCIENCE, ENGINEERING, AERONAUTICS AND AEROSPACE, DEFENSE, MEDICINE, TELEROBOTICS, ARCHITECTURE, LAW ENFORCEMENT, AND GEOPHYSICS. READERS WILL FIND CLEAR, EASY-TO-UNDERSTAND EXPLANATIONS, PHOTOS, AND ILLUSTRATIONS OF DEVICES INCLUDING THE ATHEER AIR, HTC VIVE, DAQRI SMART HELMET, OCVLUS (FACEBOOK) CV1, SONY PLAYSTATION VR, VUZIX M300, GOOGLE GLASS, AND MANY MORE. FUNCTIONAL DIAGRAMS AND PHOTOGRAPHS CLEARLY EXPLAIN HOW THESE DEVICES OPERATE, AND LINK DIRECTLY TO RELEVANT THEORETICAL AND PRACTICAL CONTENT. PRACTICAL AUGMENTED REALITY THOROUGHLY CONSIDERS THE HUMAN FACTORS OF THESE SYSTEMS, INCLUDING SENSORY AND MOTOR PHYSIOLOGY CONSTRAINTS, MONOCULAR AND BINOCULAR DEPTH CUES, ELEMENTS CONTRIBUTING TO VISUALLY-INDUCED MOTION SICKNESS AND NAUSEA, AND VERGENCE-ACCOMMODATION CONFLICTS. IT CONCLUDES BY ASSESSING BOTH THE LEGAL AND SOCIETAL IMPLICATIONS OF NEW AND EMERGING AR, VR, AND WEARABLE TECHNOLOGIES AS WELL AS PROVIDES A LOOK NEXT GENERATION SYSTEMS.

THE IMMERSIVE CLASSROOM JAIME DONALLY 2020-11-03 DISCOVER THE POSSIBILITIES OF IMMERSIVE TECHNOLOGY TO DEEPEN STUDENT ENGAGEMENT; ACTIVATE LEARNING THROUGH HUNTS, BREAKOUTS AND LABS; AND EXPLORE GLOBAL COLLABORATION. OUR CLASSROOMS ARE FULL OF INDIVIDUALS WHO LEARN IN DIVERSE WAYS, AND EDUCATORS NEED CREATIVE TEACHING APPROACHES TO ENRICH LEARNING FOR STRUGGLING STUDENTS. WHEN APPLIED EFFECTIVELY, IMMERSIVE TECHNOLOGY IN TEACHING CAN TARGET STUDENTS’ INTERESTS, PROVIDE FLEXIBILITY FOR A RANGE OF SKILL LEVELS AND EMPOWER STUDENTS’ CHOICE IN THEIR LEARNING. THE IMMERSIVE CLASSROOM HIGHLIGHTS THE POSSIBILITIES OF IMMERSIVE TECHNOLOGY TO MAKE A GREATER IMPACT AND REACH ALL STUDENT POPULATIONS. THE BOOK: PROVIDES STEP-BY-STEP INSTRUCTIONS FOR HOW TO MIX INDIVIDUAL TOOLS TO CREATE AN ECOSYSTEM OF IMMERSIVE TECHNOLOGY. OFFERS EXAMPLES FROM LEADING EDUCATORS WHO HAVE IMPLEMENTED THE TOOLS AND TECHNIQUES DISCUSSED, GIVING READERS EASY-TO-IMPLEMENT TAKEAWAYS THEY CAN INCORPORATE IN THEIR CLASSROOMS RIGHT AWAY. FEATURES ROBUST CASE STUDIES FROM LEADERS IN THE FIELD AS WELL AS STUDENT EXAMPLES OF IMMERSIVE TECHNOLOGY TO SUPPORT THE TOPICS DISCUSSED. WITH THIS BOOK, READERS GAIN INSIGHTS INTO CUSTOMIZING TOOLS THROUGH APP HACKING AND APP SMASHING, AND DISCOVER HOW PUSHING THE USE OF AUGMENTED REALITY (AR) AND VIRTUAL REALITY (VR) TOOLS BEYOND THEIR INTENDED PURPOSE CAN MAXIMIZE THEIR BENEFITS, HELPING MEET THE NEEDS OF ALL STUDENTS.

NEW PERSPECTIVES ON VIRTUAL AND AUGMENTED REALITY LINDA DANIELA 2020-05-31 NEW PERSPECTIVES ON VIRTUAL AND AUGMENTED REALITY DISCUSSES THE POSSIBILITIES OF USING VIRTUAL AND AUGMENTED REALITY IN THE ROLE OF INNOVATIVE PEDAGOGY, WHERE THERE IS AN URGENT NEED TO FIND WAYS TO TEACH AND SUPPORT LEARNING IN A TRANSFORMED LEARNING ENVIRONMENT. TECHNOLOGY CREATES OPPORTUNITIES TO LEARN DIFFERENTLY AND PRESENTS CHALLENGES FOR EDUCATION. VIRTUAL REALITY SOLUTIONS CAN BE EXCITING, CREATE INTEREST IN LEARNING, MAKE LEARNING MORE ACCESSIBLE AND MAKE LEARNING FASTER. THIS BOOK ANALYSES THE CAPABILITIES OF VIRTUAL, AUGMENTED AND MIXED REALITY BY PROVIDING IDEAS ON HOW TO MAKE LEARNING MORE EFFECTIVE, HOW EXISTING VR/AR SOLUTIONS CAN BE USED AS LEARNING TOOLS AND HOW A LEARNING PROCESS CAN BE STRUCTURED. THE VIRTUAL REALITY (VR) SOLUTIONS CAN BE USED SUCCESSFULLY FOR EDUCATIONAL PURPOSES AS THEIR USE CAN CONTRIBUTE TO THE CONSTRUCTION OF KNOWLEDGE AND THE DEVELOPMENT OF METACOGNITIVE PROCESSES. THEY ALSO CONTRIBUTE TO INCLUSIVE EDUCATION BY PROVIDING ACCESS TO KNOWLEDGE THAT WOULD NOT OTHERWISE BE AVAILABLE. THIS BOOK WILL BE OF GREAT INTEREST TO ACADEMICS, RESEARCHERS AND POST-GRADUATE STUDENTS IN THE FIELD OF EDUCATIONAL TECHNOLOGY.

VIRTUAL REALITY WITH VRTK4 RAKESH BARUAH 2019-12-06 VIRTUAL REALITY IS QUICKLY BECOMING THE NEXT MEDIUM TO COMMUNICATE YOUR IDEAS. ONCE SILOED IN MAKE-BELIEVE WORLD OF SCIENCE FICTION, VIRTUAL REALITY CAN NOW TOUCH ANY ASPECT OF YOUR LIFE. THIS BOOK SHOWS YOU HOW TO CREATE ORIGINAL VIRTUAL REALITY CONTENT USING THE UNITY GAME ENGINE AND THE VIRTUAL REALITY TOOL KIT. BY THE END OF THE BOOK YOU’LL BE CREATING YOUR OWN VIRTUAL REALITY EXPERIENCE USING THE FUNDAMENTAL BUILDING BLOCKS WITHIN. YOU’LL START BY REVIEWING SPATIAL COMPUTING, AN EMERGING FIELD THAT ENCOMPASSES SELF-DRIVING CARS TO SPACE EXPLORATION. YOU’LL ALSO CREATE YOUR OWN VIRTUAL REALITY ENVIRONMENTS FOR USE ON HEADSETS SUCH AS THOSE FROM OCVLUS AND HTC. USING THE UNITY 3D GAME ENGINE AND THE VIRTUAL REALITY TOOLKIT ON A COMPUTER OR LAPTOP, YOU WILL WALK THROUGH THE FUNDAMENTALS OF VIRTUAL REALITY WITH AS LITTLE CODE AS POSSIBLE. THAT IS THE BEAUTY OF UNITY AND THE VIRTUAL REALITY TOOLKIT. YOU WILL DISCOVER HOW TO USE BUTTONS IN A VIRTUAL SPACE, GAZE-TRACKING FOR USER INPUT, AND PHYSICS FOR ENABLING INTERACTION BETWEEN A HUMAN AND A VIRTUAL SPACE. FROM GAME DESIGN TO EDUCATION TO HEALTHCARE TO HUMAN RESOURCES, VIRTUAL REALITY OFFERS NEW AND CREATIVE WAYS TO ENGAGE USERS, STUDENTS, PATIENTS, CUSTOMERS, AND MORE. NOT A CODING BOOK, VIRTUAL REALITY WITH VRTK4 SHOWS THAT YOU DON’T NEED TO BE A COMPUTER OR GRAPHICS WHIZ TO BEGIN CREATING YOUR OWN VIRTUAL REALITY EXPERIENCES. WHAT YOU’LL LEARN GRASP VIRTUAL REALITY TOOLKIT AND ITS INTERACTION WITH UNITY 3D EXPLORE THE FUNDAMENTAL SCIENCE OF VIRTUAL REALITY REVIEW THE INNER WORKINGS OF UNITY 3D AND ITS INTEGRATION WITH VRTK4 UNDERSTAND THE BIG PICTURE OF C# CODING IN UNITY 3D INCORPORATE HEAD AND HAND MOVEMENT INTO VIRTUAL EXPERIENCES WHO THIS BOOK IS FOR CREATIVE PROFESSIONALS OR STUDENTS WHO ARE FAMILIAR WITH COMPUTER DESIGN PROGRAMS AND WANT TO BEGIN PROTOTYPING THEIR OWN ORIGINAL VIRTUAL REALITY WORK AS QUICKLY AS POSSIBLE.

UNITY VIRTUAL REALITY PROJECTS JONATHAN LINOWES 2015-08-31 EXPLORE THE WORLD OF VIRTUAL REALITY BY BUILDING IMMERSIVE AND FUN VR PROJECTS USING UNITY 3D ABOUT THIS BOOK* LEARN THE BASIC PRINCIPLES OF VIRTUAL REALITY APPLICATIONS AND GET TO KNOW HOW THEY DIFFER FROM GAMES AND DESKTOP APPS* BUILD VARIOUS TYPES OF VR EXPERIENCES, INCLUDING DIORAMA, FIRST-PERSON CHARACTERS, RIDING ON RAILS, 360 DEGREE PROJECTIONS, AND SOCIAL VR* A PROJECT-BASED GUIDE THAT TEACHES YOU TO USE UNITY TO DEVELOP VR APPLICATIONS, WHICH CAN BE EXPERIENCED WITH DEVICES SUCH AS THE OCVLUS RIFT OR GOOGLE CARDBOARD WHO THIS BOOK IS FOR IF YOU’RE A NON-PROGRAMMER UNFAMILIAR WITH 3D COMPUTER GRAPHICS, OR EXPERIENCED IN BOTH BUT NEW TO VIRTUAL REALITY, AND ARE INTERESTED IN BUILDING YOUR OWN VR GAMES OR APPLICATIONS THEN THIS BOOK IS FOR YOU. ANY EXPERIENCE IN UNITY IS AN ADVANTAGE. WHAT YOU WILL LEARN* CREATE 3D SCENES WITH UNITY AND BLENDER WHILE LEARNING ABOUT WORLD SPACE AND SCALE* BUILD AND RUN VR APPLICATIONS FOR CONSUMER HEADSETS INCLUDING OCVLUS RIFT AND GOOGLE CARDBOARD* BUILD INTERACTIVE ENVIRONMENTS WITH PHYSICS, GRAVITY, ANIMATIONS, AND LIGHTING USING THE UNITY ENGINE* EXPERIMENT WITH VARIOUS USER INTERFACE (UI) TECHNIQUES THAT YOU CAN USE IN YOUR VR APPLICATIONS* IMPLEMENT THE FIRST-PERSON AND THIRD-PERSON EXPERIENCES THAT USE ONLY HEAD MOTION GESTURES FOR INPUT* CREATE ANIMATED WALKTHROUGHS, USE 360-DEGREE MEDIA, AND BUILD MULTI-USER SOCIAL VR EXPERIENCES* LEARN ABOUT THE TECHNOLOGY AND PSYCHOLOGY OF VR INCLUDING RENDERING, PERFORMANCE AND VR MOTION SICKNESS* GAIN INTRODUCTORY AND ADVANCED EXPERIENCE IN UNITY PROGRAMMING WITH THE C# LANGUAGE IN DETAIL WHAT IS CONSUMER “VIRTUAL REALITY”? WEARING A HEAD-MOUNTED DISPLAY YOU VIEW STEREOSCOPIC 3D SCENES. YOU CAN LOOK AROUND BY MOVING YOUR HEAD, AND WALK AROUND USING HAND CONTROLS OR MOTION SENSORS. YOU ARE ENGAGED IN A FULLY IMMERSIVE EXPERIENCE. ON THE OTHER HAND, UNITY IS A POWERFUL GAME DEVELOPMENT ENGINE THAT PROVIDES A RICH SET OF FEATURES SUCH AS VISUAL LIGHTING, MATERIALS, PHYSICS, AUDIO, SPECIAL EFFECTS, AND ANIMATION FOR CREATING 2D AND 3D GAMES. UNITY 5 HAS BECOME THE LEADING PLATFORM FOR BUILDING VIRTUAL REALITY GAMES, APPLICATIONS AND EXPERIENCES FOR THIS NEW GENERATION OF CONSUMER VR DEVICES. USING A PRACTICAL AND PROJECT-BASED APPROACH, THIS BOOK WILL EDUCATE YOU ABOUT THE SPECIFICS OF VIRTUAL REALITY DEVELOPMENT IN UNITY. YOU WILL LEARN HOW TO USE UNITY TO DEVELOP VR APPLICATIONS WHICH CAN BE EXPERIENCED WITH DEVICES SUCH AS THE OCVLUS RIFT OR GOOGLE CARDBOARD. WE WILL THEN LEARN HOW TO ENGAGE WITH VIRTUAL WORLDS FROM A THIRD PERSON AND FIRST PERSON CHARACTER POINT OF VIEW. FURTHERMORE, YOU WILL EXPLORE THE TECHNICAL CONSIDERATIONS ESPECIALLY IMPORTANT AND POSSIBLY UNIQUE TO VR. THE PROJECTS IN THE BOOK WILL DEMONSTRATE HOW TO BUILD A VARIETY OF VR EXPERIENCES. YOU WILL BE DIVING INTO THE UNITY 3D GAME ENGINE VIA THE INTERACTIVE UNITY EDITOR AS WELL AS C# SHARP PROGRAMMING. BY THE END OF THE BOOK, YOU WILL BE EQUIPPED TO DEVELOP RICH, INTERACTIVE VIRTUAL REALITY EXPERIENCES USING UNITY. SO, LET’S GET TO IT! STYLE AND APPROACH THIS BOOK TAKES A PRACTICAL, PROJECT-BASED APPROACH TO TEACH SPECIFICS OF VIRTUAL REALITY DEVELOPMENT IN UNITY. USING A READER-FRIENDLY APPROACH, THIS BOOK WILL NOT ONLY PROVIDE DETAILED STEP-BY-STEP INSTRUCTIONS BUT ALSO DISCUSS THE BROADER CONTEXT AND APPLICATIONS COVERED WITHIN.

WEBGL: UP AND RUNNING TONY PARISI 2012-08-16 PRESENTS AN INTRODUCTION TO WebGL DEVELOPMENT AND PRODUCTION CONCEPTS TO CREATE FULL 3D APPLICATIONS.

VIRTUAL AND AUGMENTED REALITY IN EDUCATION, ART, AND MUSEUMS GUAZZARONI, GIULIANA 2019-11-22 DUE TO THE GROWING PREVALENCE OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES, SCHOOLS, MUSEUMS, AND ART GALLERIES WILL NEED TO CHANGE TRADITIONAL WAYS OF WORKING AND CONVENTIONAL THOUGHT PROCESSES TO FULLY EMBRACE THEIR POTENTIAL. INTEGRATING VIRTUAL AND AUGMENTED REALITY TECHNOLOGIES AND WEARABLE DEVICES INTO THESE FIELDS CAN PROMOTE HIGHER ENGAGEMENT IN AN INCREASINGLY DIGITAL WORLD. VIRTUAL AND AUGMENTED REALITY IN EDUCATION, ART, AND MUSEUMS IS AN ESSENTIAL RESEARCH BOOK THAT EXPLORES THE STRATEGIC ROLE AND USE OF VIRTUAL AND AUGMENTED REALITY IN SHAPING VISITOR EXPERIENCES AT ART GALLERIES AND MUSEUMS AND THEIR ABILITY TO ENHANCE EDUCATION. HIGHLIGHTING A RANGE OF TOPICS SUCH AS ONLINE LEARNING, DIGITAL HERITAGE, AND GAMING, THIS BOOK IS IDEAL FOR MUSEUM DIRECTORS, TOUR DEVELOPERS, EDUCATIONAL SOFTWARE DESIGNERS, 3D ARTISTS, DESIGNERS, CURATORS, PRESERVATIONISTS, CONSERVATIONISTS, EDUCATION COORDINATORS, ACADEMICIANS, RESEARCHERS, AND STUDENTS.

VIRTUAL REALITY AND ITS APPLICATION IN EDUCATION DRAGAN CVETKOVIC [?] 2021-01-14 VIRTUAL REALITY IS A SET OF TECHNOLOGIES THAT ENABLES TWO-WAY COMMUNICATION, FROM COMPUTER TO USER AND VICE VERSA. IN ONE DIRECTION, TECHNOLOGIES ARE USED TO SYNTHESIZE VISUAL, AUDITORY, TACTILE, AND SOMETIMES OTHER SENSORY EXPERIENCES IN ORDER TO

PROVIDE THE ILLUSION THAT PRACTICALLY NON-EXISTENT THINGS CAN BE SEEN, HEARD, TOUCHED, OR OTHERWISE FELT. IN THE OTHER DIRECTION, TECHNOLOGIES ARE USED TO ADEQUATELY RECORD HUMAN MOVEMENTS, SOUNDS, OR OTHER POTENTIAL INPUT DATA THAT COMPUTERS CAN PROCESS AND USE. THIS BOOK CONTAINS SIX CHAPTERS THAT COVER TOPICS INCLUDING DEFINITIONS AND PRINCIPLES OF VR, DEVICES, EDUCATIONAL DESIGN PRINCIPLES FOR EFFECTIVE USE OF VR, TECHNOLOGY EDUCATION, AND USE OF VR IN TECHNICAL AND NATURAL SCIENCES.

UNITY VIRTUAL REALITY PROJECTS JONATHAN LINOWES 2015-09-01 EXPLORE THE WORLD OF VIRTUAL REALITY BY BUILDING IMMERSIVE AND FUN VR PROJECTS USING UNITY 3D ABOUT THIS BOOK LEARN THE BASIC PRINCIPLES OF VIRTUAL REALITY APPLICATIONS AND GET TO KNOW HOW THEY DIFFER FROM GAMES AND DESKTOP APPS BUILD VARIOUS TYPES OF VR EXPERIENCES, INCLUDING DIORAMA, FIRST-PERSON CHARACTERS, RIDING ON RAILS, 360 DEGREE PROJECTIONS, AND SOCIAL VR A PROJECT-BASED GUIDE THAT TEACHES YOU TO USE UNITY TO DEVELOP VR APPLICATIONS, WHICH CAN BE EXPERIENCED WITH DEVICES SUCH AS THE OCLUS RIFT OR GOOGLE CARDBOARD WHO THIS BOOK IS FOR IF YOU'RE A NON-PROGRAMMER UNFAMILIAR WITH 3D COMPUTER GRAPHICS, OR EXPERIENCED IN BOTH BUT NEW TO VIRTUAL REALITY, AND ARE INTERESTED IN BUILDING YOUR OWN VR GAMES OR APPLICATIONS THEN THIS BOOK IS FOR YOU. ANY EXPERIENCE IN UNITY IS AN ADVANTAGE. WHAT YOU WILL LEARN CREATE 3D SCENES WITH UNITY AND BLENDER WHILE LEARNING ABOUT WORLD SPACE AND SCALE BUILD AND RUN VR APPLICATIONS FOR CONSUMER HEADSETS INCLUDING OCLUS RIFT AND GOOGLE CARDBOARD BUILD INTERACTIVE ENVIRONMENTS WITH PHYSICS, GRAVITY, ANIMATIONS, AND LIGHTING USING THE UNITY ENGINE EXPERIMENT WITH VARIOUS USER INTERFACE (UI) TECHNIQUES THAT YOU CAN USE IN YOUR VR APPLICATIONS IMPLEMENT THE FIRST-PERSON AND THIRD-PERSON EXPERIENCES THAT USE ONLY HEAD MOTION GESTURES FOR INPUT CREATE ANIMATED WALKTHROUGHS, USE 360-DEGREE MEDIA, AND BUILD MULTI-USER SOCIAL VR EXPERIENCES LEARN ABOUT THE TECHNOLOGY AND PSYCHOLOGY OF VR INCLUDING RENDERING, PERFORMANCE AND VR MOTION SICKNESS GAIN INTRODUCTORY AND ADVANCED EXPERIENCE IN UNITY PROGRAMMING WITH THE C# LANGUAGE IN DETAIL WHAT IS CONSUMER "VIRTUAL REALITY"? WEARING A HEAD-MOUNTED DISPLAY YOU VIEW STEREOSCOPIC 3D SCENES. YOU CAN LOOK AROUND BY MOVING YOUR HEAD, AND WALK AROUND USING HAND CONTROLS OR MOTION SENSORS. YOU ARE ENGAGED IN A FULLY IMMERSIVE EXPERIENCE. ON THE OTHER HAND, UNITY IS A POWERFUL GAME DEVELOPMENT ENGINE THAT PROVIDES A RICH SET OF FEATURES SUCH AS VISUAL LIGHTING, MATERIALS, PHYSICS, AUDIO, SPECIAL EFFECTS, AND ANIMATION FOR CREATING 2D AND 3D GAMES. UNITY 5 HAS BECOME THE LEADING PLATFORM FOR BUILDING VIRTUAL REALITY GAMES, APPLICATIONS AND EXPERIENCES FOR THIS NEW GENERATION OF CONSUMER VR DEVICES. USING A PRACTICAL AND PROJECT-BASED APPROACH, THIS BOOK WILL EDUCATE YOU ABOUT THE SPECIFICS OF VIRTUAL REALITY DEVELOPMENT IN UNITY. YOU WILL LEARN HOW TO USE UNITY TO DEVELOP VR APPLICATIONS WHICH CAN BE EXPERIENCED WITH DEVICES SUCH AS THE OCLUS RIFT OR GOOGLE CARDBOARD. WE WILL THEN LEARN HOW TO ENGAGE WITH VIRTUAL WORLDS FROM A THIRD PERSON AND FIRST PERSON CHARACTER POINT OF VIEW. FURTHERMORE, YOU WILL EXPLORE THE TECHNICAL CONSIDERATIONS ESPECIALLY IMPORTANT AND POSSIBLY UNIQUE TO VR. THE PROJECTS IN THE BOOK WILL DEMONSTRATE HOW TO BUILD A VARIETY OF VR EXPERIENCES. YOU WILL BE DIVING INTO THE UNITY 3D GAME ENGINE VIA THE INTERACTIVE UNITY EDITOR AS WELL AS C-SHARP PROGRAMMING. BY THE END OF THE BOOK, YOU WILL BE EQUIPPED TO DEVELOP RICH, INTERACTIVE VIRTUAL REALITY EXPERIENCES USING UNITY. SO, LET'S GET TO IT! STYLE AND APPROACH THIS BOOK TAKES A PRACTICAL, PROJECT-BASED APPROACH TO TEACH SPECIFICS OF VIRTUAL REALITY DEVELOPMENT IN UNITY. USING A READER-FRIENDLY APPROACH, THIS BOOK WILL NOT ONLY PROVIDE DETAILED STEP-BY-STEP INSTRUCTIONS BUT ALSO DISCUSS THE BROADER CONTEXT AND APPLICATIONS COVERED WITHIN.

REALITY CHECK JEREMY DALTON 2021-01-03 DISCOVER THE NEXT BIG COMPETITIVE ADVANTAGE IN BUSINESS: LEARN HOW AUGMENTED AND VIRTUAL REALITY CAN PUT YOUR BUSINESS AHEAD. AUGMENTED REALITY (AR) AND VIRTUAL REALITY (VR) ARE PART OF A NEW WAVE OF IMMERSIVE TECHNOLOGIES THAT OFFER HUGE OPPORTUNITIES FOR BUSINESSES, ACROSS INDUSTRIES AND REGARDLESS OF THEIR SIZE. MOST PEOPLE THINK OF AR OR VR AS A NEW DEVELOPMENT IN VIDEO GAMING LIKE POKÉMON GO, OR AN EXPENSIVE MARKETING CAMPAIGN BY THE NIKES OF THE WORLD. THE TRUTH IS, BUSINESSES OF ANY SIZE CAN PUT THESE NEW TECHNOLOGIES TO IMMEDIATE USE IN AREAS THAT INCLUDE: - LEARNING AND DEVELOPMENT - REMOTE COLLABORATION AND ASSISTANCE - VISUALIZATION OF REMOTE ASSETS AND ENVIRONMENTS - SALES AND MARKETING - CONSUMER BEHAVIOUR RESEARCH REALITY CHECK DISPELS THE COMMON MISCONCEPTIONS OF AR AND VR, SUCH AS THEM BEING TOO EXPENSIVE OR NOT EASILY SCALABLE, AND DETAILS HOW BUSINESS LEADERS CAN INTEGRATE THEM INTO THEIR BUSINESS TO DELIVER MORE EFFICIENT, IMPACTFUL AND COST-EFFECTIVE BUSINESS SOLUTIONS. THE UP AND COMING VOICE OF AR AND VR FOR BUSINESSES, JEREMY DALTON, USES CASE STUDIES FROM ORGANIZATIONS ALL OVER THE WORLD INCLUDING CISCO, FORD, GLAXOSMITHKLINE, LA LIGA AND VODAFONE TO SHOWCASE THE PRACTICAL USES OF IMMERSIVE TECHNOLOGIES. REALITY CHECK MAKES CUTTING-EDGE TECHNOLOGY ACCESSIBLE AND GROUNDS THEM INTO THE EVERYDAY WORKINGS OF NORMAL BUSINESSES. IT IS YOUR ONE-STOP NON-TECHNICAL GUIDE TO INCREDIBLY EXCITING NEW TECHNOLOGIES THAT WILL DELIVER RESULTS.

COMPLETE VIRTUAL REALITY AND AUGMENTED REALITY DEVELOPMENT WITH UNITY JESSE GLOVER 2019-04-17 GET CLOSE AND COMFORTABLE WITH UNITY AND BUILD APPLICATIONS THAT RUN ON HOLOLENS, DAYDREAM, AND OCLUS RIFT KEY FEATURES BUILD FUN AUGMENTED REALITY APPLICATIONS USING ARKIT, ARCORE, AND VUFORIA EXPLORE VIRTUAL REALITY BY DEVELOPING MORE THAN 10 ENGAGING PROJECTS LEARN HOW TO INTEGRATE AR AND VR CONCEPTS TOGETHER IN A SINGLE APPLICATION BOOK DESCRIPTION UNITY IS THE LEADING PLATFORM TO DEVELOP MIXED REALITY EXPERIENCES BECAUSE IT PROVIDES A GREAT PIPELINE FOR WORKING WITH 3D ASSETS. USING A PRACTICAL AND PROJECT-BASED APPROACH, THIS LEARNING PATH EDUCATES YOU ABOUT THE SPECIFICS OF AR AND VR DEVELOPMENT USING UNITY 2018 AND UNITY 3D. YOU'LL LEARN TO INTEGRATE, ANIMATE, AND OVERLAY 3D OBJECTS ON YOUR CAMERA FEED, BEFORE MOVING ON TO IMPLEMENT SENSOR-BASED AR APPLICATIONS. YOU'LL EXPLORE VARIOUS CONCEPTS BY CREATING AN AR APPLICATION USING VUFORIA FOR BOTH macOS AND WINDOWS FOR ANDROID AND iOS DEVICES. NEXT, YOU'LL LEARN HOW TO DEVELOP VR APPLICATIONS THAT CAN BE EXPERIENCED WITH DEVICES, SUCH AS OCLUS AND VIVE. YOU'LL ALSO EXPLORE VARIOUS TOOLS FOR VR DEVELOPMENT: GAZE-BASED VERSUS HAND CONTROLLER INPUT, WORLD SPACE UI CANVASES, LOCOMOTION AND TELEPORTATION, TIMELINE ANIMATION, AND MULTIPLAYER NETWORKING. YOU'LL LEARN THE UNITY 3D GAME ENGINE VIA THE INTERACTIVE UNITY EDITOR AND C# PROGRAMMING. BY THE END OF THIS LEARNING PATH, YOU'LL BE FULLY EQUIPPED TO DEVELOP RICH, INTERACTIVE MIXED REALITY EXPERIENCES USING UNITY. THIS LEARNING PATH INCLUDES CONTENT FROM THE FOLLOWING PAKT PRODUCTS: UNITY VIRTUAL REALITY PROJECTS - SECOND EDITION BY JONATHAN LINOWES UNITY 2018 AUGMENTED REALITY PROJECTS BY JESSE GLOVER WHAT YOU WILL LEARN CREATE 3D SCENES TO LEARN ABOUT WORLD SPACE AND SCALE MOVE AROUND YOUR SCENES USING LOCOMOTION AND TELEPORTATION CREATE FILTERS OR OVERLAYS THAT WORK WITH FACIAL RECOGNITION SOFTWARE INTERACT WITH VIRTUAL OBJECTS USING EYE GAZE, HAND CONTROLLERS, AND USER INPUT EVENTS DESIGN AND BUILD A VR STORYTELLING ANIMATION WITH A SOUNDTRACK AND TIMELINES CREATE SOCIAL VR EXPERIENCES WITH UNITY NETWORKING WHO THIS BOOK IS FOR IF YOU ARE A GAME DEVELOPER FAMILIAR WITH 3D COMPUTER GRAPHICS AND INTERESTED IN BUILDING YOUR OWN AR AND VR GAMES OR APPLICATIONS, THEN THIS LEARNING PATH IS FOR YOU. ANY PRIOR EXPERIENCE IN UNITY AND C# WILL BE AN ADVANTAGE. IN ALL, THIS COURSE TEACHES YOU THE TOOLS AND TECHNIQUES TO DEVELOP ENGAGING MIXED REALITY APPLICATIONS.

EXTENDED REALITY IN PRACTICE BERNARD MARR 2021-04-21 EXTENDED REALITY IN PRACTICE AS ONE OF THE LEADING BUSINESS TRENDS TODAY, EXTENDED REALITY (XR) PROMISES TO REVOLUTIONIZE THE WAY CONSUMERS EXPERIENCE THEIR ENCOUNTERS WITH BRANDS AND PRODUCTS OF ALL KINDS. TOP BRANDS FROM PEPSI AND UBER TO BOEING AND THE U.S. ARMY ARE CREATING IMMERSIVE DIGITAL EXPERIENCES THAT CAPTURE THE INTEREST AND IMAGINATIONS OF THEIR TARGET MARKETS. IN EXTENDED REALITY IN PRACTICE: 100+ AMAZING WAYS VIRTUAL, AUGMENTED AND MIXED REALITY ARE CHANGING BUSINESS AND SOCIETY, CELEBRATED FUTURIST, TECHNOLOGIST, SPEAKER, AND AUTHOR BERNARD MARR DELIVERS A ROBUST AND ACCESSIBLE EXPLANATION OF HOW ALL KINDS OF FIRMS ARE DEVELOPING INNOVATIVE XR SOLUTIONS TO BUSINESS PROBLEMS. YOU'LL DISCOVER THE NEW WAYS THAT COMPANIES ARE HARNESSING VIRTUAL, AUGMENTED, AND MIXED REALITY TO IMPROVE CONSUMERS' PERCEPTION OF THEIR BRANDS. YOU'LL ALSO FIND OUT WHY THERE ARE LIKELY TO BE NO INDUSTRIES THAT WILL REMAIN UNTOUCHED BY THE USE OF XR, AND WHY THESE TECHNOLOGIES ARE POPULAR ACROSS THE COMMERCIAL, GOVERNMENTAL, AND NON-PROFIT SPECTRUMS. PERFECT FOR CHIEF EXECUTIVE OFFICERS, BUSINESS OWNERS, LEADERS, MANAGERS, AND PROFESSIONALS WORKING IN BUSINESS DEVELOPMENT, EXTENDED REALITY IN PRACTICE WILL ALSO EARN A PLACE IN THE LIBRARIES OF PROFESSIONALS WORKING WITHIN INNOVATION TEAMS SEEKING AN ACCESSIBLE RESOURCE ON THE POSSIBILITIES AND POTENTIAL CREATED BY AUGMENTED, VIRTUAL, AND MIXED REALITY TECHNOLOGIES. AN INSIGHTFUL EXPLORATION OF EXTENDED REALITY FROM A RENOWNED THOUGHT LEADER, TECHNOLOGIST, AND FUTURIST EXTENDED REALITY IN PRACTICE: 100+ AMAZING WAYS VIRTUAL, AUGMENTED AND MIXED REALITY ARE CHANGING BUSINESS AND SOCIETY OFFERS READERS A FRONT-ROW SEAT TO ONE OF THE MOST EXCITING AND IMPACTFUL BUSINESS TRENDS TO FIND TRACTION IN YEARS. CELEBRATED FUTURIST AND AUTHOR BERNARD MARR WALKS YOU THROUGH THE INS AND OUTS OF XR, OR EXTENDED REALITY, AND HOW IT PROMISES TO REVOLUTIONIZE EVERYTHING FROM THE EXPERIENCE OF WALKING THROUGH AN AIRPORT OR SHOPPING MALL TO GRABBING A BURGER AT A FAST-FOOD RESTAURANT. DISCOVER INSIGHTFUL AND ILLUMINATING CASE STUDIES FROM BUSINESSES AND ORGANIZATIONS IN A VARIETY OF INDUSTRIES, INCLUDING BURGER KING, BMW, BOEING, AND THE U.S. ARMY, AND SEE HOW THEY'RE TURNING VIRTUAL, MIXED, AND AUGMENTED REALITY EXPERIENCES INTO BIG WINS FOR THEIR STAKEHOLDERS. YOU'LL ALSO FIND OUT ABOUT HOW XR CAN HELP BUSINESSES TACKLE THE PROBLEMS OF LACKLUSTER ENGAGEMENT AND LUKEWARM CUSTOMER LOYALTY WITH REINVIGORATED CONSUMER EXPERIENCES. IDEAL FOR EXECUTIVES, FOUNDERS, BUSINESS LEADERS AND OWNERS, AND PROFESSIONALS OF ALL SORTS, EXTENDED REALITY IN PRACTICE IS AN INDISPENSABLE GUIDE TO AN INDISPENSABLE NEW TECHNOLOGY. THE BOOK IS THE LEADING RESOURCE FOR ANYONE SEEKING A ONE-STOP REFERENCE FOR AUGMENTED, VIRTUAL, AND MIXED REALITY TECH AND THEIR LIMITLESS POTENTIAL FOR ENTERPRISE.

IMPLEMENTING AUGMENTED REALITY INTO IMMERSIVE VIRTUAL LEARNING ENVIRONMENTS DONNA RUSSELL 2020-12-18 "THIS BOOK PROVIDES A COMPREHENSIVE REVIEW OF EDUCATIONAL PROGRAMS THAT ARE INTEGRATING AUGMENTED REALITY INTO IMMERSIVE VIRTUAL LEARNING ENVIRONMENTS"--

VIRTUAL, AUGMENTED, AND MIXED REALITIES IN EDUCATION DEJIAN LIU 2017-11-13 THIS BOOK DESCRIBES THE CURRENT STATE OF THE ART OF VARIOUS TYPES OF IMMERSIVE LEARNING: IN RESEARCH, IN PRACTICE, AND IN THE MARKETPLACE. IT DISCUSSES ADVANCED APPROACHES IN THE DESIGN AND DEVELOPMENT FOR VARIOUS FORMS OF IMMERSIVE LEARNING ENVIRONMENTS, AND ALSO THE EMERGING INNOVATIONS IN ASSESSMENT AND RESEARCH IN THE FIELD. IN ADDITION, IT DEMONSTRATES THE OPPORTUNITIES AND CHALLENGES IN IMPLEMENTING ADVANCES IN VR AND IMMERSION AT SCALE IN FORMAL AND INFORMAL LEARNING. WE ARE LIVING IN A TIME OF RAPID ADVANCES IN TERMS OF BOTH THE CAPABILITIES AND THE COST OF VIRTUAL REALITY, MULTI-USER VIRTUAL ENVIRONMENTS, AND VARIOUS FORMS OF MIXED REALITY. THESE NEW MEDIA POTENTIALLY OFFER EXTRAORDINARY OPPORTUNITIES FOR ENHANCING BOTH MOTIVATION AND LEARNING ACROSS A RANGE OF SUBJECT AREAS, STUDENT DEVELOPMENTAL LEVELS, AND EDUCATIONAL SETTINGS. WITH THE DEVELOPMENT OF PRACTICAL AND AFFORDABLE VIRTUAL REALITY AND MIXED REALITY, PEOPLE NOW HAVE THE CHANCE TO EXPERIENCE IMMERSIVE LEARNING BOTH IN CLASSROOMS AND INFORMALLY IN HOMES, LIBRARIES, AND COMMUNITY CENTERS. THE BOOK APPEALS TO A BROAD READERSHIP INCLUDING TEACHERS, ADMINISTRATORS, SCHOLARS, POLICY MAKERS, INSTRUCTIONAL DESIGNERS, EVALUATORS AND INDUSTRY LEADERS.

THE VR BOOK JASON JERALD 2015-09-01 VIRTUAL REALITY (VR) POTENTIALLY PROVIDES OUR MINDS WITH DIRECT ACCESS TO DIGITAL MEDIA IN A WAY THAT AT FIRST SEEMS TO HAVE NO LIMITS. HOWEVER, CREATING COMPELLING VR EXPERIENCES IS AN INCREDIBLY COMPLEX CHALLENGE. WHEN VR IS DONE WELL, THE RESULTS ARE BRILLIANT AND PLEASURABLE EXPERIENCES THAT GO BEYOND WHAT WE CAN DO IN THE REAL WORLD. WHEN VR IS DONE BADLY, NOT ONLY IS THE SYSTEM FRUSTRATING TO USE, BUT SICKNESS CAN RESULT. REASONS FOR BAD VR ARE NUMEROUS; SOME FAILURES COME FROM THE LIMITATIONS OF TECHNOLOGY, BUT MANY COME FROM A LACK OF UNDERSTANDING PERCEPTION, INTERACTION, DESIGN PRINCIPLES, AND REAL USERS. THIS BOOK DISCUSSES SUCH ISSUES, FOCUSING UPON THE HUMAN ELEMENT OF VR RATHER THAN TECHNICAL IMPLEMENTATION, FOR IF WE DO NOT GET THE HUMAN ELEMENT CORRECT, THEN NO AMOUNT OF TECHNOLOGY WILL MAKE VR ANYTHING MORE THAN AN INTERESTING TOOL CONFINED TO RESEARCH LABORATORIES. EVEN WHEN VR PRINCIPLES ARE FULLY UNDERSTOOD, FIRST IMPLEMENTATIONS ARE RARELY NOVEL AND NEVER IDEAL DUE TO THE COMPLEX NATURE OF VR AND THE COUNTLESS POSSIBILITIES. HOWEVER, THE VR PRINCIPLES DISCUSSED WITHIN ENABLE US TO INTELLIGENTLY EXPERIMENT WITH THE RULES AND ITERATIVELY DESIGN TOWARDS INNOVATIVE EXPERIENCES.

UNITY 2020 VIRTUAL REALITY PROJECTS JONATHAN LINOWES 2020-07-30 EXPLORE THE LATEST FEATURES OF UNITY AND BUILD VR EXPERIENCES INCLUDING FIRST-PERSON INTERACTIONS, AUDIO FIREBALL GAMES, 360-DEGREE MEDIA, ART GALLERY TOURS, AND VR STORYTELLING KEY FEATURES DISCOVER STEP-BY-STEP INSTRUCTIONS AND BEST PRACTICES TO BEGIN YOUR VR DEVELOPMENT JOURNEY EXPLORE UNITY FEATURES SUCH AS URP RENDERING, XR INTERACTION TOOLKIT, AND PROBUILDER BUILD IMPRESSIVE VR-BASED

[learning-virtual-reality-developing-immersive-experiences-and-applications-for-desktop-web-and-le](#)

APPS AND GAMES THAT CAN BE EXPERIENCED USING MODERN DEVICES LIKE OCLUS RIFT AND OCLUS QUEST BOOK DESCRIPTION THIS THIRD EDITION OF THE UNITY VIRTUAL REALITY (VR) DEVELOPMENT GUIDE IS UPDATED TO COVER THE LATEST FEATURES OF UNITY 2019.4 OR LATER VERSIONS - THE LEADING PLATFORM FOR BUILDING VR GAMES, APPLICATIONS, AND IMMERSIVE EXPERIENCES FOR CONTEMPORARY VR DEVICES. ENHANCED WITH MORE FOCUS ON GROWING COMPONENTS, SUCH AS UNIVERSAL RENDER PIPELINE (URP), EXTENDED REALITY (XR) PLUGINS, THE XR INTERACTION TOOLKIT PACKAGE, AND THE LATEST VR DEVICES, THIS EDITION WILL HELP YOU TO GET UP TO DATE WITH THE CURRENT STATE OF VR. WITH ITS PRACTICAL AND PROJECT-BASED APPROACH, THIS BOOK COVERS THE SPECIFICS OF VIRTUAL REALITY DEVELOPMENT IN UNITY. YOU'LL LEARN HOW TO BUILD VR APPS THAT CAN BE EXPERIENCED WITH MODERN DEVICES FROM OCLUS, VIVE, AND OTHERS. THIS VIRTUAL REALITY BOOK PRESENTS LIGHTING AND RENDERING STRATEGIES TO HELP YOU BUILD CUTTING-EDGE GRAPHICS, AND EXPLAINS URP AND RENDERING CONCEPTS THAT WILL ENABLE YOU TO ACHIEVE REALISM FOR YOUR APPS. YOU'LL BUILD REAL-WORLD VR EXPERIENCES USING WORLD SPACE USER INTERFACE CANVASES, LOCOMOTION AND TELEPORTATION, 360-DEGREE MEDIA, AND TIMELINE ANIMATION, AS WELL AS LEARN ABOUT IMPORTANT VR DEVELOPMENT CONCEPTS, BEST PRACTICES, AND PERFORMANCE OPTIMIZATION AND USER EXPERIENCE STRATEGIES. BY THE END OF THIS UNITY BOOK, YOU'LL BE FULLY EQUIPPED TO USE UNITY TO DEVELOP RICH, INTERACTIVE VIRTUAL REALITY EXPERIENCES. WHAT YOU WILL LEARN UNDERSTAND THE CURRENT STATE OF VIRTUAL REALITY AND VR CONSUMER PRODUCTS GET STARTED WITH UNITY BY BUILDING A SIMPLE DIORAMA SCENE USING UNITY EDITOR AND IMPORTED ASSETS CONFIGURE YOUR UNITY VR PROJECTS TO RUN ON VR PLATFORMS SUCH AS OCLUS, STEAMVR, AND WINDOWS IMMERSIVE MR DESIGN AND BUILD A VR STORYTELLING ANIMATION WITH A SOUNDTRACK AND TIMELINES IMPLEMENT AN AUDIO FIREBALL GAME USING GAME PHYSICS AND PARTICLE SYSTEMS USE VARIOUS SOFTWARE PATTERNS TO DESIGN UNITY EVENTS AND INTERACTABLE COMPONENTS DISCOVER BEST PRACTICES FOR LIGHTING, RENDERING, AND POST-PROCESSING WHO THIS BOOK IS FOR WHETHER YOU'RE A NON-PROGRAMMER UNFAMILIAR WITH 3D COMPUTER GRAPHICS OR EXPERIENCED IN BOTH BUT NEW TO VIRTUAL REALITY, IF YOU'RE INTERESTED IN BUILDING YOUR OWN VR GAMES OR APPLICATIONS, THIS UNITY BOOK IS FOR YOU. ANY EXPERIENCE IN UNITY WILL BE USEFUL BUT IS NOT NECESSARY.

UNITY@ VIRTUAL REALITY DEVELOPMENT WITH VRTK4 CHRISTOPHER COUTINHO 2022-03-31 GET HANDS-ON PRACTICAL KNOWLEDGE OF CONCEPTS AND TECHNIQUES FOR VR DEVELOPMENT USING UNITY@ AND VRTK VERSION 4. THIS BOOK IS A STEP-BY-STEP GUIDE TO LEARNING VRTK 4 FOR DEVELOPING IMMERSIVE VR EXPERIENCES. UNITY IS A POWERFUL GAME ENGINE FOR DEVELOPING VR EXPERIENCES. WITH ITS BUILT-IN SUPPORT FOR ALL MAJOR VR HEADSETS, IT'S THE PERFECT TOOL FOR DEVELOPERS TO REALIZE THEIR VISION IN VR. VRTK IS A BATTLE-TESTED VR SOLUTION FOR UNITY; VRTK 4, IN CONJUNCTION WITH UNITY, HAS CHANGED THE DYNAMICS OF VR DEVELOPMENT. THIS BOOK FOCUSES ON CREATING DEEP UNDERSTANDING OF HOW ADVANCED VR MECHANICS AND TECHNIQUES ARE BUILT AND UTILIZED AS A PART OF A VR FRAMEWORK. YOU WILL START OFF BY SETTING UP YOUR DEVICES FOR VR DEVELOPMENT AND LEARN ABOUT THE ADVANTAGES OF USING VRTK 4 OVER ALTERNATE SDKs. YOU WILL LEARN TO SETUP YOUR VERY OWN CUSTOM VRTK RIG, FIND OUT HOW TO SETUP VARIOUS ADVANCED VR MECHANICS AND LOCOMOTION TECHNIQUES, HOW TO CREATE SEVERAL SPATIAL UI OBJECTS, AND HOW TO SETUP UNITY 2D UI CONTROLS. YOU WILL ALSO COVER ADVANCED TOPICS SUCH AS USING ANGULAR AND LINEAR DRIVES, SETTING UP A VR SIMULATOR TO WORK WITH A XBOX CONTROLLER, AND REALISTIC PHYSICS VR HANDS. BY THE END OF THIS BOOK, YOU WILL KNOW HOW TO CREATE ADVANCED VR MECHANICS THAT CAN BE USED WITHIN ANY VR EXPERIENCE, GAME, OR APP AND DEPLOYED ACROSS SEVERAL PLATFORMS AND HARDWARE. WHAT YOU WILL LEARN UNDERSTAND HOW TO DEVELOP IMMERSIVE VR EXPERIENCES CREATE A VR SIMULATOR TO TEST YOUR PROJECT GENERATE ADVANCED SPATIAL UI THAT YOU CAN INTERACT WITH PHYSICALLY USING YOUR HANDS WHO THIS BOOK IS FOR? UNITY GAME DEVELOPERS CONVERSANT WITH UNITY'S EDITOR. BASIC KNOWLEDGE OF HOW UNITY PREFABS FUNCTION, HOW EVENTS WORK IN GENERAL, AND PROGRAMMING LOGIC WOULD BE BENEFICIAL.

CREATING AUGMENTED AND VIRTUAL REALITIES ERIN PANGILINAN 2019-03-18 DESPITE POPULAR FORAYS INTO AUGMENTED AND VIRTUAL REALITY IN RECENT YEARS, SPATIAL COMPUTING STILL SITS ON THE CUSP OF MAINSTREAM USE. DEVELOPERS, ARTISTS, AND DESIGNERS LOOKING TO ENTER THIS FIELD TODAY HAVE FEW PLACES TO TURN FOR EXPERT GUIDANCE. IN THIS BOOK, ERIN PANGILINAN, STEVE LUKAS, AND VASANTH MOHAN EXAMINE THE AR AND VR DEVELOPMENT PIPELINE AND PROVIDE HANDS-ON PRACTICE TO HELP YOU HONE YOUR SKILLS. THROUGH STEP-BY-STEP TUTORIALS, YOU'LL LEARN HOW TO BUILD PRACTICAL APPLICATIONS AND EXPERIENCES GROUNDED IN THEORY AND BACKED BY INDUSTRY USE CASES. IN EACH SECTION OF THE BOOK, INDUSTRY SPECIALISTS, INCLUDING TIMONI WEST, VICTOR PRISACARIU, AND NICOLAS MEULEAU, JOIN THE AUTHORS TO EXPLAIN THE TECHNOLOGY BEHIND SPATIAL COMPUTING. IN THREE PARTS, THIS BOOK COVERS: ART AND DESIGN: EXPLORE SPATIAL COMPUTING AND DESIGN INTERACTIONS, HUMAN-CENTERED INTERACTION AND SENSORY DESIGN, AND CONTENT CREATION TOOLS FOR DIGITAL ART TECHNICAL DEVELOPMENT: EXAMINE DIFFERENCES BETWEEN ARKIT, ARCORE, AND SPATIAL MAPPING-BASED SYSTEMS; LEARN APPROACHES TO CROSS-PLATFORM DEVELOPMENT ON HEAD-MOUNTED DISPLAYS USE CASES: LEARN HOW DATA AND MACHINE LEARNING VISUALIZATION AND AI WORK IN SPATIAL COMPUTING, TRAINING, SPORTS, HEALTH, AND OTHER ENTERPRISE APPLICATIONS

EMERGING TOOLS AND APPLICATIONS OF VIRTUAL REALITY IN EDUCATION CHOI, DONG HWA 2016-01-18 VIRTUAL REALITY IS THE NEXT FRONTIER OF COMMUNICATION. AS TECHNOLOGY EXPONENTIALLY EVOLVES, SO DO THE WAYS IN WHICH HUMANS INTERACT AND DEPEND UPON IT. IT ONLY FOLLOWS THAT TO EDUCATE AND STIMULATE THE NEXT GENERATION OF INDUSTRY LEADERS, ONE MUST USE THE MOST INNOVATIVE TOOLS AVAILABLE. BY COUPLING EDUCATION WITH THE MOST IMMERSIVE TECHNOLOGY AVAILABLE, TEACHERS MAY INSPIRE STUDENTS IN EXCITING NEW WAYS. EMERGING TOOLS AND APPLICATIONS OF VIRTUAL REALITY IN EDUCATION EXPLORES THE POTENTIAL AND PRACTICAL USES OF VIRTUAL REALITY IN CLASSROOMS WITH A FOCUS ON PEDAGOGICAL AND INSTRUCTIONAL OUTCOMES AND STRATEGIES. THIS TITLE FEATURES CURRENT EXPERIMENTS IN THE USE OF AUGMENTED REALITY IN TEACHING AND HIGHLIGHTS THE EFFECTS IT HAD ON STUDENTS. THE AUTHORS ALSO ILLUSTRATE THE USE OF TECHNOLOGY IN TEACHING THE HUMANITIES, AS STUDENTS WELL-ROUNDED IN THE FIELDS OF TECHNOLOGY AND COMMUNICATION ARE COVETABLE IN THE WORKFORCE. THIS BOOK WILL INSPIRE EDUCATORS, ADMINISTRATORS, LIBRARIANS, STUDENTS OF EDUCATION, AND VIRTUAL REALITY SOFTWARE DEVELOPERS TO PUSH THE LIMITS OF THEIR CRAFT.

LEARNING VIRTUAL REALITY TONY PARISI 2015-10-26 AS VIRTUAL REALITY APPROACHES MAINSTREAM CONSUMER USE, A VIBRANT DEVELOPMENT ECOSYSTEM HAS EMERGED IN THE PAST FEW YEARS. THIS HANDS-ON GUIDE TAKES YOU THROUGH VR DEVELOPMENT ESSENTIALS FOR DESKTOP, MOBILE, AND BROWSER-BASED APPLICATIONS. YOU'LL EXPLORE THE THREE GO-TO PLATFORMS—OCLUS VR, GEAR VR, AND CARDBOARD VR—AS WELL AS SEVERAL VR DEVELOPMENT ENVIRONMENTS, PROGRAMMING TOOLS, AND TECHNIQUES. IF YOU'RE AN EXPERIENCED PROGRAMMER FAMILIAR WITH MOBILE DEVELOPMENT, THIS BOOK WILL HELP YOU GAIN A WORKING KNOWLEDGE OF VR DEVELOPMENT THROUGH CLEAR AND SIMPLE EXAMPLES. ONCE YOU CREATE A COMPLETE APPLICATION IN THE FINAL CHAPTER, YOU'LL HAVE A JUMPSTART ON THE NEXT MAJOR ENTERTAINMENT MEDIUM. LEARN VR BASICS FOR UI DESIGN, 3D GRAPHICS, AND STEREO RENDERING EXPLORE UNITY 3D, THE CURRENT DEVELOPMENT CHOICE AMONG GAME ENGINES CREATE NATIVE APPLICATIONS FOR DESKTOP COMPUTERS WITH THE OCLUS RIFT DEVELOP MOBILE APPLICATIONS FOR SAMSUNG'S GEAR VR WITH THE ANDROID AND OCLUS MOBILE SDKS BUILD BROWSER-BASED APPLICATIONS WITH THE WEBVR JAVASCRIPT API AND WebGL CREATE SIMPLE AND AFFORDABLE MOBILE APPS FOR ANY SMARTPHONE WITH GOOGLE'S CARDBOARD VR BRING EVERYTHING TOGETHER TO BUILD A 360-DEGREE PANORAMIC PHOTO VIEWER

DESIGNING IMMERSIVE 3D EXPERIENCES RENEE STEVENS 2021-06-30 DESIGNING IMMERSIVE 3D EXPERIENCES CAN HELP ANY VISUAL DESIGNER MOVE INTO THE FAST-GROWING FIELDS OF 3D AND EXTENDED REALITY (XR) DESIGN. LEADING DESIGNER RENEE STEVENS (POWERED BY DESIGN) INTRODUCES A PROVEN APPROACH AND AN EFFECTIVE DESIGN THINKING PROCESS YOU CAN USE TO CREATE OUTSTANDING, IMMERSIVE USER EXPERIENCES. STEVENS GUIDES YOU THROUGH CREATING YOUR FIRST XR PROJECT - AND IMPROVING EVERY PROJECT AFTER THAT. DRAWING ON HER EXPERIENCE BUILDING A MAJOR UNIVERSITY'S FIRST COURSE IN AUGMENTED REALITY, SHE PREPARES VISUAL DESIGNERS TO SUCCEED WITH 3D AND XR DESIGN IN ENVIRONMENTS FROM MOBILE AND WEB TO WEARABLES. STEVENS BEGINS BY EXPLORING WHAT XR AND 3D IMMERSIVE DESIGN ARE, HOW THEY'RE EVOLVING, AND HOW YOU MAY ALREADY BE USING THEM. NEXT, SHE EXPLORES CORE CONCEPTS AND TECHNOLOGIES, FROM COMPUTER-HUMAN INTERACTION TO PROJECTION MAPPING AND HEAD-MOUNTED DISPLAYS. THEN, YOU'LL WALK THROUGH PROJECTS FROM START TO FINISH, LEARNING HOW TO: PERFORM UPFRONT IDEATION FOR NEW XR/3D PROJECTS: SET "WHY" GOALS, BALANCE INNOVATION WITH PRACTICALITY, AND KEEP IT ALL HUMAN BUILD SEAMLESS AND APPROACHABLE USER EXPERIENCES AND INTERFACES PROTOTYPE XR EXPERIENCES ACCOUNT FOR PERCEPTION AND OTHER HUMAN FACTORS AUGMENT TYPOGRAPHY, COLOR, AUDIO, AND VOICE TAKE YOUR NEXT STEPS WITH XR DESIGN, AND MORE *HUMAN 4.0* YVES RYBARCZYK 2021-01-07 INFORMATION TECHNOLOGY IS BECOMING INGRAINED IN OUR EVERYDAY LIFE. THE CONSEQUENCE OF THIS IS THAT THE LINE BETWEEN HUMANS AND TECHNOLOGY IS MORE AND MORE BLURRED, AND TENDS TO TRANSFORM THE HUMAN BEING INTO A CYBER-ORGANISM. THIS TRANSFORMATION, ACCOMPANIED BY THE EMERGENCE OF INDUSTRY 4.0, BRINGS US TO DEFINE A NEW TERM: HUMAN 4.0. THIS NEW GENERATION OF INDIVIDUALS HAS TO DEAL WITH SMART INTERCONNECTED PERSVASIVE ENVIRONMENTS SUPPORTED BY THE INTERNET OF THINGS. NEVERTHELESS, THIS MERGE BETWEEN HUMANS AND TECHNOLOGY IS NOT STRAIGHT-FORWARD AND REQUIRES AN ADDITIONAL EFFORT TO REDUCE THE GAP BETWEEN THE HUMAN BEING AND THE MACHINE. SUCH RESEARCH IMPLIES A MULTIDISCIPLINARY APPROACH TO THE INTERACTION BETWEEN BIOLOGICAL ORGANISMS AND ARTIFICIAL ARTEFACTS. THIS BOOK INTENDS TO PROVIDE THE READER WITH AN INSIGHT INTO THE NEW RELATIONSHIP WITH THE TECHNOLOGY BROUGHT ABOUT BY INDUSTRY 4.0, AND HOW IT CAN MAKE THE HUMAN-MACHINE INTERACTION MORE EFFICIENT.

UNITY VIRTUAL REALITY PROJECTS JONATHAN LINOWES 2018-05-24 EXPLORE THE LATEST FEATURES OF UNITY 2018 TO CREATE IMMERSIVE VR PROJECTS FOR OCLUS RIFT, HTC VIVE, DAYDREAM AND GEAR VR KEY FEATURES A PROJECT-BASED GUIDE TO TEACH YOU HOW TO DEVELOP IMMERSIVE AND FUN VR APPLICATIONS USING UNITY 3D BUILD EXPERIENCES WITH INTERACTABLE OBJECTS, PHYSICS, UI, ANIMATIONS, C# SCRIPTING, AND OTHER UNITY FEATURES EXPLORE THE WORLD OF VR BY BUILDING EXPERIENCES SUCH AS DIORAMA, FIRST-PERSON CHARACTERS, 360-DEGREE PROJECTIONS, SOCIAL VR, AUDIO FIREBALL GAME, AND VR STORYTELLING BOOK DESCRIPTION UNITY HAS BECOME THE LEADING PLATFORM FOR BUILDING VIRTUAL REALITY GAMES, APPLICATIONS, AND EXPERIENCES FOR THIS NEW GENERATION OF CONSUMER VR DEVICES. UNITY VIRTUAL REALITY PROJECTS WALKS YOU THROUGH A SERIES OF HANDS-ON TUTORIALS AND IN-DEPTH DISCUSSIONS ON USING THE UNITY GAME ENGINE TO DEVELOP VR APPLICATIONS. WITH ITS PRACTICAL AND PROJECT-BASED APPROACH, THIS BOOK WILL GET YOU UP TO SPEED WITH THE SPECIFICS OF VR DEVELOPMENT IN UNITY. YOU WILL LEARN HOW TO USE UNITY TO DEVELOP VR APPLICATIONS THAT CAN BE EXPERIENCED WITH DEVICES SUCH AS OCLUS, DAYDREAM, AND VIVE. AMONG THE MANY TOPICS AND PROJECTS, YOU WILL EXPLORE GAZE-BASED VERSUS HAND-CONTROLLER INPUT, WORLD SPACE UI CANVASES, LOCOMOTION AND TELEPORTATION, SOFTWARE DESIGN PATTERNS, 360-DEGREE MEDIA, TIMELINE ANIMATION, AND MULTIPLAYER NETWORKING. YOU WILL LEARN ABOUT THE UNITY 3D GAME ENGINE VIA THE INTERACTIVE UNITY EDITOR, AND YOU WILL ALSO LEARN ABOUT C# PROGRAMMING. BY THE END OF THE BOOK, YOU WILL BE FULLY EQUIPPED TO DEVELOP RICH, INTERACTIVE VR EXPERIENCES USING UNITY. WHAT YOU WILL LEARN CREATE 3D SCENES WITH UNITY AND OTHER 3D TOOLS WHILE LEARNING ABOUT WORLD SPACE AND SCALE BUILD AND RUN VR APPLICATIONS FOR SPECIFIC HEADSETS, INCLUDING OCLUS, VIVE, AND DAYDREAM INTERACT WITH VIRTUAL OBJECTS USING EYE GAZE, HAND CONTROLLERS, AND USER INPUT EVENTS MOVE AROUND YOUR VR SCENES USING LOCOMOTION AND TELEPORTATION IMPLEMENT AN AUDIO FIREBALL GAME USING PHYSICS AND PARTICLE SYSTEMS IMPLEMENT AN ART GALLERY TOUR WITH TELEPORTATION AND DATA INFO DESIGN AND BUILD A VR STORYTELLING ANIMATION WITH A SOUNDTRACK AND TIMELINES CREATE SOCIAL VR EXPERIENCES WITH UNITY NETWORKING WHO THIS BOOK IS FOR IF YOU'RE A NON-PROGRAMMER UNFAMILIAR WITH 3D COMPUTER GRAPHICS, OR EXPERIENCED IN BOTH BUT NEW TO VIRTUAL REALITY, AND ARE INTERESTED IN BUILDING YOUR OWN VR GAMES OR APPLICATIONS, THEN THIS BOOK IS FOR YOU. ANY EXPERIENCE IN UNITY IS AN ADVANTAGE.

IMMERSIVE LEARNING CRAIG FREHLICH 2020-10-01 MOST PEOPLE WANT TO REACH THEIR MAXIMUM POTENTIAL; AND THE USE OF TOOLS ARE NO DIFFERENT. SOME SAY POWER IS INFLUENCE. IF THIS IS TRUE, THEN VIRTUAL REALITY HAS "SUPERPOWERS" BECAUSE OF ITS ABILITY TO MAKE THE UNREAL VISCERALLY REAL, ENGAGING AND IMMERSIVE. THANKS TO THESE POWERS VR CAN INFLUENCE AND AFFECT EDUCATION IN WAYS THAT NO TECHNOLOGY TOOL HAS IN THE PAST. THIS BOOK WILL HELP PEOPLE UNDERSTAND THE POWER AND TRUE POTENTIAL OF VIRTUAL REALITY (OR VR). THE PRIME DIRECTIVE OF THIS BOOK IS TO PROVIDE EDUCATORS WITH A WAY OF THINKING ABOUT HOW TO USE VIRTUAL REALITY IN EDUCATION IN ORDER TO REVEAL ITS TRUE SUPERPOWERS. AND, TO ARM EDUCATORS WITH SEVERAL HANDS-ON LESSONS TO GET THEM STARTED ON IMPLEMENTING VR AS A TOOL TO ENHANCE LEARNING OUTCOMES. ULTIMATELY, THE BOOK AIMS TO HAVE EDUCATORS CLEARLY UNDERSTAND VR'S ROLE IN TRANSFORMING EDUCATION, THUS REACHING ITS MAXIMUM POTENTIAL.

AR AND VR USING THE WEBXR API RAKESH BARUAH 2020-12-01 GAIN AN IN-DEPTH KNOWLEDGE IN IMMERSIVE WEB DEVELOPMENT TO CREATE AUGMENTED REALITY (AR) AND VIRTUAL REALITY (VR) APPLICATIONS INSIDE WEB BROWSERS USING WEBXR API, WebGL,

THREEJS, AND A-FRAME. THIS PROJECT-BASED BOOK WILL PROVIDE THE PRACTICE AND PORTFOLIO CONTENT TO MAKE THE MOST OF WHAT THE FUTURES OF SPATIAL COMPUTING AND IMMERSIVE TECHNOLOGY HAVE TO OFFER. BEGINNING WITH TECHNICAL ANALYSIS OF HOW WEB BROWSERS FUNCTION, THE BOOK COVERS PROGRAMMING LANGUAGES SUCH AS WebGL, JavaScript, and HTML, WITH AN EYE ON A COMPLETE UNDERSTANDING OF THE WebXR LIFECYCLE. YOU'LL THEN EXPLORE HOW CONTEMPORARY WEB BROWSERS WORK AT THE CODE LEVEL AND SEE HOW TO SET UP A LOCAL DEVELOPMENT SERVER AND USE IT WITH THE VISUAL STUDIO CODE IDE TO CREATE 3D ANIMATION IN THE WebGL PROGRAMMING LANGUAGE. WITH A FAMILIARITY OF THE WEB-RENDERING PIPELINE IN PLACE, YOU'LL VENTURE ON TO WebGL ABSTRACTIONS SUCH AS THE THREEJS JavaScript LIBRARY AND MOZILLA'S A-FRAME XR FRAMEWORK, WHICH USE WebXR TO CREATE HIGH-END VISUAL EFFECTS. IN THE FINAL PROJECTS OF THE BOOK, YOU'LL CREATE AN AUGMENTED REALITY WEB SESSION FOR AN ANDROID PHONE DEVICE, AND CREATE A VR SCENE IN A-FRAME (BUILT ON THREEJS) TO DEMO ESSENTIAL COMPONENTS OF THE WebXR API PERTAINING TO USER POSITIONING AND INTERACTION. GAME ENGINES HAVE BECOME COMMON-PLACE FOR THE CREATION OF MIXED REALITY CONTENT. HOWEVER, DEVELOPERS NOT INTERESTED IN LEARNING ENTIRELY NEW WORKFLOWS MAY BE BETTER SUITED TO WORK WITHIN A MEDIUM ALMOST UNIVERSALLY OPEN TO ALL—THE WEB; AR AND VR USING THE WebXR API WILL SHOW YOU THE WAY. WHAT YOU'LL LEARN MASTER THE CREATION OF VIRTUAL REALITY AND AUGMENTED REALITY FEATURES FOR WEB PAGE PREPARE TO WORK AS AN IMMERSIVE WEB DEVELOPER WITH A PORTFOLIO OF PROJECTS IN SOUGHT-AFTER TECHNOLOGIES REVIEW THE FUNDAMENTALS OF WRITING SHADERS IN WebGL EXPERIENCE THE UNITY BETWEEN CLIENT, SERVER, AND CLOUD ARCHITECTURE AS IT APPLIES TO LOCATION-BASED AR WHO THIS BOOK IS FOR ASPIRING IMMERSIVE WEB DEVELOPERS AND DEVELOPERS ALREADY FAMILIAR WITH THE FUNDAMENTALS OF WEB DEVELOPMENT WHO WANT TO FURTHER EXPLORE TOPICS SUCH AS SPATIAL COMPUTING, COMPUTER VISION, SPATIAL ANCHORS, AND CLOUD-COMPUTING FOR MULTI-USER SOCIAL EXPERIENCES.

VIRTUAL & AUGMENTED REALITY FOR DUMMIES PAUL MEALY 2018-06-08 AN EASY-TO-UNDERSTAND PRIMER ON VIRTUAL REALITY AND AUGMENTED REALITY VIRTUAL REALITY (VR) AND AUGMENTED REALITY (AR) ARE DRIVING THE NEXT TECHNOLOGICAL REVOLUTION. IF YOU WANT TO GET IN ON THE ACTION, THIS BOOK HELPS YOU UNDERSTAND WHAT THESE TECHNOLOGIES ARE, THEIR HISTORY, HOW THEY'RE BEING USED, AND HOW THEY'LL AFFECT CONSUMERS BOTH PERSONALLY AND PROFESSIONALLY IN THE VERY NEAR FUTURE. WITH VR AND AR POISED TO BECOME MAINSTREAM WITHIN THE NEXT FEW YEARS, AN ACCESSIBLE BOOK TO BRING USERS UP TO SPEED ON THE SUBJECT IS SORELY NEEDED—AND THAT'S WHERE THIS HANDY REFERENCE COMES IN! RATHER THAN FOCUSING ON A SPECIFIC PIECE OF HARDWARE (HTC VIVE, OCULUS RIFT, IOS ARKIT) OR SOFTWARE (UNITY, UNREAL ENGINE), VIRTUAL & AUGMENTED REALITY FOR DUMMIES OFFERS A BROAD LOOK AT BOTH VR AND AR, GIVING YOU A BIRD'S EYE VIEW OF WHAT YOU CAN EXPECT AS THEY CONTINUE TO TAKE THE WORLD BY STORM. * KEEPS YOU UP-TO-DATE ON THE PULSE OF THIS FAST-CHANGING TECHNOLOGY * EXPLORES THE MANY WAYS AR/VR ARE BEING USED IN FIELDS SUCH AS HEALTHCARE, EDUCATION, AND ENTERTAINMENT * INCLUDES INTERVIEWS WITH DESIGNERS, DEVELOPERS, AND TECHNOLOGISTS CURRENTLY WORKING IN THE FIELDS OF VR AND AR PERFECT FOR BOTH POTENTIAL CONTENT CREATORS AND CONTENT CONSUMERS, THIS BOOK WILL CHANGE THE WAY YOU APPROACH AND CONTRIBUTE TO THESE EMERGING TECHNOLOGIES.

DEVELOPING VIRTUAL REALITY APPLICATIONS ALAN B. CRAIG 2009-06-02 VIRTUAL REALITY SYSTEMS ENABLE ORGANIZATIONS TO CUT COSTS AND TIME, MAINTAIN FINANCIAL AND ORGANIZATIONAL CONTROL OVER THE DEVELOPMENT PROCESS, DIGITALLY EVALUATE PRODUCTS BEFORE HAVING THEM CREATED, AND ALLOW FOR GREATER CREATIVE EXPLORATION. IN THIS BOOK, VR DEVELOPERS ALAN CRAIG, WILLIAM SHERMAN, AND JEFFREY WILL EXAMINE A COMPREHENSIVE COLLECTION OF CURRENT, UNIQUE, AND FOUNDATIONAL VR APPLICATIONS IN A MULTITUDE OF FIELDS, SUCH AS BUSINESS, SCIENCE, MEDICINE, ART, ENTERTAINMENT, AND PUBLIC SAFETY AMONG OTHERS. AN INSIDER'S VIEW OF WHAT WORKS, WHAT DOESN'T WORK, AND WHY, DEVELOPING VIRTUAL REALITY APPLICATIONS EXPLORES CORE TECHNICAL INFORMATION AND BACKGROUND THEORY AS WELL AS THE EVOLUTION OF KEY APPLICATIONS FROM THEIR GENESIS TO THEIR MOST CURRENT FORM. DEVELOPMENTAL TECHNIQUES ARE CROSS-REFERENCED BETWEEN DIFFERENT APPLICATIONS LINKING INFORMATION TO DESCRIBE OVERALL VR TRENDS AND FUNDAMENTAL BEST PRACTICES. THIS SYNERGY, COUPLED WITH THE MOST UP TO DATE RESEARCH BEING CONDUCTED, PROVIDES A HANDS-ON GUIDE FOR BUILDING APPLICATIONS, AND AN ENHANCED, PANORAMIC VIEW OF VR DEVELOPMENT. DEVELOPING VIRTUAL REALITY APPLICATIONS IS AN INDISPENSABLE ONE-STOP REFERENCE FOR ANYONE WORKING IN THIS BURGEONING FIELD. DOZENS OF DETAILED APPLICATION DESCRIPTIONS PROVIDE PRACTICAL IDEAS FOR VR DEVELOPMENT IN ALL AREAS OF INTEREST! DEVELOPMENT TECHNIQUES ARE CROSS REFERENCED BETWEEN DIFFERENT APPLICATION AREAS, PROVIDING FUNDAMENTAL BEST PRACTICES!

AUGMENTED REALITY IN EDUCATION VLADIMIR GEROIMENKO 2020-05-26 THIS IS THE FIRST COMPREHENSIVE RESEARCH MONOGRAPH DEVOTED TO THE USE OF AUGMENTED REALITY IN EDUCATION. IT IS WRITTEN BY A TEAM OF 58 WORLD-LEADING RESEARCHERS, PRACTITIONERS AND ARTISTS FROM 15 COUNTRIES, PIONEERING IN EMPLOYING AUGMENTED REALITY AS A NEW TEACHING AND LEARNING TECHNOLOGY AND TOOL. THE AUTHORS EXPLORE THE STATE OF THE ART IN EDUCATIONAL AUGMENTED REALITY AND ITS USAGE IN A LARGE VARIETY OF PARTICULAR AREAS, SUCH AS MEDICAL EDUCATION AND TRAINING, ENGLISH LANGUAGE EDUCATION, CHEMISTRY LEARNING, ENVIRONMENTAL AND SPECIAL EDUCATION, DENTAL TRAINING, MINING ENGINEERING TEACHING, HISTORICAL AND FINE ART EDUCATION. AUGMENTED REALITY IN EDUCATION: A NEW TECHNOLOGY FOR TEACHING AND LEARNING IS ESSENTIAL READING NOT ONLY FOR EDUCATORS OF ALL TYPES AND LEVELS, EDUCATIONAL RESEARCHERS AND TECHNOLOGY DEVELOPERS, BUT ALSO FOR STUDENTS (BOTH GRADUATES AND UNDERGRADUATES) AND ANYONE WHO IS INTERESTED IN THE EDUCATIONAL USE OF EMERGING AUGMENTED REALITY TECHNOLOGY.

UNREAL ENGINE 4 VIRTUAL REALITY PROJECTS KEVIN MACK 2019-04-30 LEARN TO DESIGN AND BUILD VIRTUAL REALITY

EXPERIENCES, APPLICATIONS, AND GAMES IN UNREAL ENGINE 4 THROUGH A SERIES OF PRACTICAL, HANDS-ON PROJECTS THAT TEACH YOU TO CREATE CONTROLLABLE AVATARS, USER INTERFACES, AND MORE. KEY FEATURES LEARN ABOUT EFFECTIVE VR DESIGN AND DEVELOP VIRTUAL REALITY GAMES AND APPLICATIONS FOR EVERY VR PLATFORM BUILD ESSENTIAL FEATURES FOR VR SUCH AS PLAYER LOCOMOTION AND INTERACTION, 3D USER INTERFACES, AND 360 MEDIA PLAYERS LEARN ABOUT MULTIPLAYER NETWORKING AND HOW TO EXTEND THE ENGINE USING PLUGINS AND ASSET PACKS BOOK DESCRIPTION UNREAL ENGINE 4 (UE4) IS A POWERFUL TOOL FOR DEVELOPING VR GAMES AND APPLICATIONS. WITH ITS VISUAL SCRIPTING LANGUAGE, BLUEPRINT, AND BUILT-IN SUPPORT FOR ALL MAJOR VR HEADSETS, IT'S A PERFECT TOOL FOR DESIGNERS, ARTISTS, AND ENGINEERS TO REALIZE THEIR VISIONS IN VR. THIS BOOK WILL GUIDE YOU STEP-BY-STEP THROUGH A SERIES OF PROJECTS THAT TEACH ESSENTIAL CONCEPTS AND TECHNIQUES FOR VR DEVELOPMENT IN UE4. YOU WILL BEGIN BY LEARNING HOW TO THINK ABOUT (AND DESIGN FOR) VR AND THEN PROCEED TO SET UP A DEVELOPMENT ENVIRONMENT. A SERIES OF PRACTICAL PROJECTS FOLLOWS, TAKING YOU THROUGH ESSENTIAL VR CONCEPTS. THROUGH THESE EXERCISES, YOU'LL LEARN HOW TO SET UP UE4 PROJECTS THAT RUN EFFECTIVELY IN VR, HOW TO BUILD PLAYER LOCOMOTION SCHEMES, AND HOW TO USE HAND CONTROLLERS TO INTERACT WITH THE WORLD. YOU'LL THEN MOVE ON TO CREATE USER INTERFACES IN 3D SPACE, USE THE EDITOR'S VR MODE TO BUILD ENVIRONMENTS DIRECTLY IN VR, AND PROFILE/OPTIMIZE WORLDS YOU'VE BUILT. FINALLY, YOU'LL EXPLORE MORE ADVANCED TOPICS, SUCH AS DISPLAYING STEREO MEDIA IN VR, NETWORKING IN UNREAL, AND USING PLUGINS TO EXTEND THE ENGINE. THROUGHOUT, THIS BOOK FOCUSES ON CREATING A DEEPER UNDERSTANDING OF WHY THE RELEVANT TOOLS AND TECHNIQUES WORK AS THEY DO, SO YOU CAN USE THE TECHNIQUES AND CONCEPTS LEARNED HERE AS A SPRINGBOARD FOR FURTHER LEARNING AND EXPLORATION IN VR. WHAT YOU WILL LEARN UNDERSTAND DESIGN PRINCIPLES AND CONCEPTS FOR BUILDING VR APPLICATIONS SET UP YOUR DEVELOPMENT ENVIRONMENT WITH UNREAL BLUEPRINTS AND C++ CREATE A PLAYER CHARACTER WITH SEVERAL LOCOMOTION SCHEMES EVALUATE AND SOLVE PERFORMANCE PROBLEMS IN VR TO MAINTAIN HIGH FRAME RATES DISPLAY MONO AND STEREO VIDEOS IN VR EXTEND UNREAL ENGINE'S CAPABILITIES USING VARIOUS PLUGINS WHO THIS BOOK IS FOR THIS BOOK IS FOR ANYONE INTERESTED IN LEARNING TO DEVELOP VIRTUAL REALITY GAMES AND APPLICATIONS USING UE4. DEVELOPERS NEW TO UE4 WILL BENEFIT FROM HANDS-ON PROJECTS THAT GUIDE READERS THROUGH CLEARLY-EXPLAINED STEPS, WHILE BOTH NEW AND EXPERIENCED DEVELOPERS WILL LEARN CRUCIAL PRINCIPLES AND TECHNIQUES FOR VR DEVELOPMENT IN UE4.

CURRENT AND PROSPECTIVE APPLICATIONS OF VIRTUAL REALITY IN HIGHER EDUCATION CHOI, DONG HWA 2020-07-31 FOR THE LAST DECADE, VIRTUAL REALITY HAS BEEN UTILIZED IN DIVERSE FIELDS SUCH AS ENTERTAINMENT, MEDICINE, AND INDUSTRY. RECENTLY, VIRTUAL REALITY HAS BEEN APPLIED IN EDUCATIONAL SETTINGS IN ORDER TO TRANSFORM STUDENT LEARNING AND EXPERIENCES THROUGH SUCH METHODS AS BUILDING PROTOTYPES USING DIGITAL DEVICES OR EXPLORING NEW CULTURES THROUGH IMMERSIVE INTERACTIONS. TEACHERS WHO CAN INCORPORATE VIRTUAL REALITY INTO THEIR CLASSROOMS CAN PROVIDE THEIR STUDENTS WITH MORE MEANINGFUL LEARNING EXPERIENCES AND CAN WITNESS HIGHER ENGAGEMENT. CURRENT AND PROSPECTIVE APPLICATIONS OF VIRTUAL REALITY IN HIGHER EDUCATION IS A CUTTING-EDGE ACADEMIC RESEARCH BOOK THAT PROVIDES COMPREHENSIVE RESEARCH ON THE INTEGRATION OF VIRTUAL REALITY IN EDUCATION PROGRAMS AND ESTABLISHES FOUNDATIONS FOR COURSE DESIGN, PROGRAM DEVELOPMENT, AND INSTITUTIONAL STRATEGIC PLANNING. THE BOOK COVERS AN OVERALL UNDERSTANDING AND APPROACH TO VIRTUAL REALITY IN EDUCATION, SPECIFIC APPLICATIONS OF USING VIRTUAL REALITY IN HIGHER EDUCATION, AND PROSPECTS AND ISSUES OF VIRTUAL REALITY IN THE FUTURE. HIGHLIGHTING A WIDE RANGE OF TOPICS SUCH AS GAMIFICATION, TEACHER TRAINING, AND VIRTUAL REALITY, THIS BOOK IS IDEAL FOR TEACHERS, INSTRUCTIONAL DESIGNERS, CURRICULUM DEVELOPERS, ACADEMICIANS, PROGRAM DEVELOPERS, ADMINISTRATORS, EDUCATIONAL SOFTWARE DEVELOPERS, POLICYMAKERS, RESEARCHERS, EDUCATION PROFESSIONALS, AND STUDENTS.

REALITY BYTES JESSE LUBINSKY 2020-01-14 TRANSFORM TEACHING AND LEARNING WITH AR AND VR IN YOUR CLASSROOM. WE'RE AT THE DAWN OF AN INCREDIBLE TRANSFORMATION IN EDUCATION. AUGMENTED REALITY AND VIRTUAL REALITY--TECHNOLOGIES THAT WERE ONCE THE PROVINCE OF SCIENCE FICTION AND FANTASY--ARE FASTER, BETTER, AND MORE AFFORDABLE THAN EVER. THESE TOOLS HAVE THE POTENTIAL TO NOT ONLY INSPIRE STUDENTS BUT TO REDEFINE HOW WE TEACH AND COLLABORATE. BUT WIDESPREAD ADOPTION OF AR AND VR IN K-12 CLASSROOMS REQUIRES TAKING RISKS, INVESTING MONEY AND TIME, AND TRAINING EDUCATORS. REALITY BYTES MAKES THE CASE FOR TAKING THIS LEAP BY SHOWING HOW EDUCATORS ARE USING THESE AMAZING TECHNOLOGIES, AND IT PROVIDES A POWERFUL FRAMEWORK TO HELP ANYONE, IN ANY SCHOOL, JOIN THEM. THE INNOVATIVE EDUCATORS PROFILED ARE ALREADY DESIGNING LEARNING EXPERIENCES USING AR AND VR THAT SUPERCHARGE STUDENT MOTIVATION, ENCOURAGE CREATIVITY, AND MAKE OTHERWISE IMPOSSIBLE EDUCATIONAL ADVENTURES ACCESSIBLE TO ALL. YOU CAN DO THE SAME, USING EASY-TO-IMPLEMENT RESOURCES THAT WILL REVOLUTIONIZE HOW YOU APPROACH INSTRUCTION. EQUIP YOUR STUDENTS WITH THE SKILLS THEY'LL NEED IN THE FUTURE--TODAY. REALITY BYTES OPENS THE DOORS TO TOOLS FOR MEETING EVERY STUDENT NO MATTER WHERE THEY ARE. THIS BOOK OUTLINES THE POWER THAT AR AND VR HAVE IN BUILDING EMPATHY AND GROWING CRITICAL WORLDVIEWS AND PERSPECTIVES. CHRISTINE, JESSE, AND MICAH CAST AN EXCITING VISION FOR THE FUTURE OF EDUCATION! --KEN SHELTON, EDUCATIONAL STRATEGIST, EQUITY AND INCLUSION CONSULTANT CREATING ENGAGING LESSONS THAT SUCCESSFULLY INTEGRATE TECHNOLOGY CAN BE CHALLENGING. REALITY BYTES IS HERE TO HELP WITH TONS OF IMAGES, CLASSROOM STORIES, AND IDEAS THAT WILL HELP YOU CREATE STUDENT-CENTERED LESSONS THAT ALLOW YOUR STUDENTS TO EXPERIENCE CONTENT IN A WHOLE NEW WAY. NO MATTER THE GRADE LEVEL, THERE IS SOMETHING FOR EVERYONE IN THIS WONDERFULLY IMMERSIVE BOOK. --ALICE KEELER, TEACHER, EDETC EXPERT, GOOGLE CERTIFIED INNOVATOR WHILE YOU WON'T SEE WINONA RYDER'S NAME ON THE COVER OF THIS BOOK, YOU WILL FIND SOME STAR POWER IN IT-- THE POWER TO CREATE STAR LEARNERS IN OUR CLASSROOMS USING CUTTING-EDGE TOOLS! REALITY BYTES WILL YOU GIVE YOU THE TOOLS, THE PEDAGOGY, AND A PRACTICAL FRAMEWORK TO BRING THE NEW REALITY OF LEARNING INTO YOUR CLASSROOM. --KASEY BELL, AUTHOR OF SHAKE UP LEARNING: PRACTICAL IDEAS TO MOVE LEARNING FROM STATIC TO DYNAMIC