Trace Dressen

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EDUCATION

Master of Entertainment Technology *August 2018 – May 2020*
Carnegie Mellon University, *Pittsburgh, PA*
Bachelor of Science: Mechanical Engineering *August 2012 – May 2017*
Texas A&M University, *College Station, TX*
Final GPA: 3.752, University Honors, Engineering Honors, University Scholar
Passed Fundamentals of Engineering Exam (Engineer in Training) *August 2017*

ACADEMIC PROJECTS

Building Virtual Worlds *August 2018 – Current*
- Worked in multidisciplinary teams to design, build, test, and present games using different types of technologies, including Vive (VR), Meta 2 (AR), and Kinect (motion-controlled). In these projects, I acted as producer, designer, artist, and playtester.

PERSONAL PROJECTS

Theme Sparks *July 2017 – Current*
- Created, designed, and currently playtesting and balancing this competitive multiplayer theme park-designing game

Buns Out! *October 2018*
- Worked with a team to design, playtest, and balance this four-player, competitive burger-building card game for a game jam

EXPERIENCE

Walt Disney World® Resort, Orlando, FL
Show Mechanical Design & Engineering Intern *August 2017 – June 2018*
- Designed and analyzed show safety systems and audio-animatronics using Solidworks and ANSYS based on requirements from engineers, maintenance cast members, technical directors, and performers

Central Shops Engineering Intern *May 2017 – August 2017*
- Automated data collection and reporting of job plans/resource management using Excel
- Conducted time studies and analyzed space usage to improve Central Shops warehouse layout

Resorts Engineering Intern *January 2016 – May 2016*
- Used applications such as Maximo, Excel, and Access to create databases, which were used to keep track of maintenance schedules, resort carpets, HVAC systems, lighting fixtures, and other equipment
- Created presentations for resort personnel to reinforce safety measures in engineering and construction projects

Texas A&M University, College Station, TX
Researcher *May 2015 – December 2015*
- Conducted research on composite beams with polymer matrix and 3D printed reinforcement
- Learned skills in 3D printing, part design, material science, data acquisition, and solid mechanics
- Co-authored a paper presented at the International Solid Freeform Fabrication Symposium
- Used 3D printing to design a haptic feedback device for training surgeons in bone-drilling procedures

SKILLS AND TOOLS

- Tools include: Maya, Unity, C#, Microsoft Office (PowerPoint, Word, Excel), Adobe Suite (After Effects, Premiere, Audition, Photoshop, Illustrator), SOLIDWORKS (Certified Professional), AutoCAD, ANSYS, MATLAB, Mathematica
- Relevant classes taken include: Building Virtual Worlds, Visual Storytelling, Improv, Engineering Math III, Differential Equations, Linear Algebra, Mechatronics, Computer Aided Engineering, Advanced System Dynamics and Controls

ACCOMPLISHMENTS

- Taught a class at Texas A&M in Spring 2017 semester on immersion and immersive technologies
- Developed an algorithm to automate (using Mathematica) the calculation of a mathematical pattern that had not been successfully demonstrated before. The algorithm was demonstrated on US Air Force supercomputers.
- Achieved Eagle Scout rank
- Former President of Texas A&M's Theme Park Organization, a group dedicated to learning about the theming, designing, and building of theme parks