Adam Wermus

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WORK EXPERIENCE

Intel — July 2019-Present
Houdini Generalist Contractor — Manhattan Beach, California

- Used Houdini to clean up point cloud data for Virtual Reality production shots
- Collaborated with a team of artists and engineers to develop tools in Houdini to optimize workflow

Walt Disney Imagineering — April 2018-November 2018
Project Hire Pipeline Developer — Glendale, California

- Developed new Computer Vision algorithms in Python for facial scanning project
- Presented live demo at Open House operating scanning rig and guest data

Thinksquirrel — November 2016-January 2017
Contracted Researcher — Houston, Texas

- Wrote solvers in C# for a plugin in Unity for Smoothed Particle Hydrodynamics
- Implemented a new solver that expanded flexibility of viscosity for artists and took larger time steps than existing methods for fluid simulations

Disney Interactive — January 2016-June 2016
Research and Development Intern — Salt Lake City, UT

- Wrote solvers in C++ for cloth simulations and character effects on Disney Infinity video game comparing its performance with existing methods
- Optimized 5 out of 7 simulations with research and development from new solver based on speed, flexibility, and artistic look

Side Effects Software — September 2015-December 2015
Co-Op Testing — Toronto, ON

- Tested modeling, texturing, and pyro simulations for the release of Houdini 15
- Updated documentation for every example file to facilitate tutorials for users

PHYSICAL SIMULATION RESEARCH

N-Body, Projectiles, Pendulums, Springs, FLIP Fluids, Collisions:
- Implemented, tested, and compared Parker-Sochacki method against other numerical methods on different physical simulations in Houdini.
- New method is often more accurate, conserves more energy with and without collisions, takes larger time steps, and has a wider range in flexibility for constants involved in the Ordinary Differential Equations

EDUCATION

Brigham Young University, Provo, UT — August 2015
Post-Baccalaureate: Computer Programming classes in Computer Science, Physics, Math, and Mechanical Engineering,

University of Bradford, West Yorkshire, England — July 2015
Master of Science: Computer Animation and Visual Effects
Master's Thesis: Implemented the Parker-Sochacki method on Rigid Body and Fluid simulations to improve accuracy and simulation time

James Madison University, Harrisonburg, Virginia — August 2013
Majors: Physics and Math
Minors: Music, Astronomy, Business, and Jazz