

Kevin Sun

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EDUCATION

University of Texas at Austin class of 2018
B.S. Computer Science
Certificate in Digital Arts & Media

Data Structures, Algorithms & Complexity,
Advanced Computer Architecture, Operating
Systems, Computer Graphics, Physical Simulation,
3D Art Production

WORK EXPERIENCE

PRESENT

Software Engineer Intern
Google

Part of Fun Propulsion Labs developing game libraries for internal and open source. Developing visual scripting tool for the Firebase Unity SDK.
<https://firebase.google.com/docs/unity/setup>

JUNE–AUGUST 2016

Contract Programmer
Certain Affinity

Engine and gameplay programming for an unannounced title in Unreal Engine 4. Diagnosed gameplay bugs such as incorrect behavior of radial force actors. Implemented asset bookmarking for the Unreal Engine editor using Epic's UI framework Slate. Created spline follow and event trigger tool for cinematic designers. This tool also supports variable velocity and time visualization along spline.

JUNE – AUGUST 2015

Software Engineer Intern
Applied Research Labs

Part of the Engineering Acoustics Division working on the AN/WQX-2 sonar device. Developed C++ wrapper library for the ActiveMQ messaging library. Wrote unit tests and performance analyses.

MARCH–MAY 2015

Game Programmer
UT Center for identity

Developed educational tower defense game about internet safety in Javascript game framework Phaser. Programmer and co-designer. The game was showcased at the Center's annual conference.

SKILLS

LANGUAGES C/C++, Javascript, C#, Java
TOOLS OpenGL, glm, Eigen, Qt, gdb,
Visual Studio, Unreal Engine 4,
Unity, Maya, Perforce, Git,
Firebase, AWS

PROJECTS

Eggs for Breakfast

An anxious story where choosing what to say is not a multiple choice question. Players form sentences from wordbanks to respond to dialogue. Solo project made in Javascript game framework Phaser. Wrote scenes in Twine (interactive story visualizer) and converted stories to JSON. Story branching heuristic is based on regex. Featured at multiple developer showcases.

The Culling

Immersive theatre experience which utilizes projections to create unique interactive puzzles for players to solve, involving pulling levers and making formations. Uses the Kinect for body tracking and Unreal Engine 4 Blueprints for interactivity and rendering. Uses Spout and D3 to communicate with projectors. Multiple showings including SXSW.

Intro to Being Here

Transmedia game and play. Walking simulator set in UT's theatre building where they makes a "being" and brings it into reality by picking up objects and feeding them to the "being". Stored in-game behavior to affect events in the play. Made in Unreal Engine 4 with C++ and Blueprints for Mac and Windows. Used AWS EC2 for Perforce servers and user info database. Showcased at Cohen New Works Festival.

Rigid Body Elastic Rod Engine

C++/OpenGL implementation of rigid body rods and elastic rods made of chained rigid rods. Simulation includes bending energies and rigid body collision. Engine supported drawing debug shapes, serialization and FPS camera controls.

Rain Simulation

C++/OpenGL implementation of Shallow Wave Equations. Forces are added dynamically to the system by random rain hitting the puddle.

Tomasulo Processor

Out of order processor with reorder buffer and register renaming made for RISC architecture in verilog.