

Kevin Sun

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EDUCATION

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

WORK EXPERIENCE

PRESENT

Software Engineer Intern

Google

Part of Fun Propulsion Labs developing visual scripting tool for Firebase Cloud Functions developed in C++. Designed data schema to facilitate communication between client-side GUI and Firebase Cloud Functions with Flatbuffers. Implemented client-side operations such as creating functional nodes, connecting data pins and undo/redo.

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 Phaser.js. Programmer and co-designer. The game was showcased at the Center's annual conference.

SKILLS

LANGUAGES C++, C, C#, Java, Javascript

TOOLS OpenGL, glm, Eigen, Qt, gdb,
Flatbuffers, Visual Studio,
Unreal Engine 4, Perforce, Git

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 Phaser.js. Wrote exporter for Twine (interactive story visualizer) to JSON. Powered story branching with regex heuristic. 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. Tracked interactions using the Kinect. Developed gameplay in Unreal Engine 4. Communicated with projectors using the Spout and D3 libraries. Multiple showings including SXSW.

Intro to Being Here

Transmedia video game play. Walking simulator set in UT's theatre building where players make "content" in a digital world and bring it into reality by picking up and feeding objects to the "content". Developed in Unreal Engine for Mac and Windows. Admined Perforce servers and stored tracked user data with AWS EC2 servers. Managed 2 remote artists making sure assets came in as needed and on time. Showcased at Cohen New Works Festival.

Ribid 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.