Matthew Zhan

Phone: (512) 577-7517 Email: matthewzhan@utexas.edu
LinkedIn: http://lnked.in/zhan

EDUCATION

Bachelor of Engineering, Electrical and Computer Engineering
The University of Texas at Austin
August 2012 - May 2016
GPA: 3.59
Concentration: Software Engineering

RELATED COURSES

Software Engineering	Software Design II
Algorithms	Communications
Real-time Operating Systems	Concurrent and Distributed Systems
Computer Architecture	Big Data and Machine Learning
Requirements Engineering	Digital Logic Design
Differential Equations	Linear Systems and Signals
Probability	Discrete Math

COMPUTER SKILLS

Languages & Software: Java, C++, C, Qt Framework, 2D Graphics, UX, Python, MySQL, Assembly
Operating Systems: Windows, Linux, OS X
Source Control: GIT

EXPERIENCE

Image Processing Engineer at MetaVi Labs — October 2015 - Present
Austin, TX

- Harmony Platform - Microscopy Analysis
- Improved edge case detection for tube formation assays, reducing the processing time of videos by up to 20 minutes
- Refactored the error logging process into a module that standardized and simplified debugging for existing

Software Engineer Intern at Polycom — July 2015 - September 2015
Austin, TX

- Firmware Testing Automation - Visual Statechart
- Developed an open-source, raster graphics editor for hierarchical finite state machines using C++ and the Qt Framework
- Designed and implemented a code exporter that converts state machines directly to skeleton C++ class and header files, reducing coding time by up to three hours
- Rapidly evolved the program with impactful updates by adapting requirements from consultations and meetings with end users; drastically improved the speed of producing complex and lucid state machine designs
- *Website:* https://github.com/daviddrell/visualsc

Software Engineer Intern at The Center of Intelligent Spatial Computing for Water/Energy Science (CISC) — June 2014 - August 2014
Fairfax, Virginia

- Big Geoscience Data - Cloud Framework
- Simplified analysis of large, cloud-stored geodata files by developing middleware to quickly render geomaps using interpolation algorithms
- Assessed behavior patterns of app-users using GPS data to profile their movement

- Accelerated development progress by regularly exchanging critique in meetings

Tutor at The University of Texas at Austin August 2013 - May 2014
Austin, TX

- Undergrad Tutor - Electrical Engineering
- Mentored EE students to hone their knowledge, effectively solve problems, and efficiently study for tests
- Reduced challenging problems as a team of tutors and students, collaborating on thorough and simple strategies for solving problems

PUBLICATIONS

Matthew Zhan, Zhenlong Li, Chaowei Yang, Baoxuan Jin, Manzhu Yu, Kai Liu, Min Sun, "Enabling Big Geoscience Data Analytics with a Cloud-Based, MapReduce-Enabled and Service-Oriented Workflow Framework," Research Gate, March 12, 2015.

PROJECTS

ReQ
Description: Lead a team to develop a two-interface mobile application to enhance the dining experience. The idea behind the system is to provide a communication channel between diners and the restaurant. The diners have an app on their phone and can connect to their current restaurant's tablet app. The waiter's interface shows a top-down layout of the tables and displays real-time notifications of common diner needs. From the phone app, diners can instantly order from the menu, get the check, ask for refills, and more without having to call over a waiter, saving valuable time for diners and the restaurant.

Rho
Description: Developed a 2D platform shooter game built on a realistic physics engine. Practically infinite variations of situations with gravity, grappling hooks, and over 10 unique physics-based weapons.

Kepler Orbit
Description: Developed a 2D physics sandbox that simulates the effect of gravity between bodies of mass. Progammed additional features for artistic expression, including line tracing and glowing. Released the app for iOS on the App Store.
Website: `https://itunes.apple.com/us/app/kepler-orbit/id508039840?mt=8`