Jason Tan

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Objective

Seeking a position focused in software engineering and system design, specifically implementing software architecture from top-level design solutions where I can maximize the skills I've gained from pursuing a degree in computer science.

Education

University of California, San Diego | GPA: 3.821 | Graduated - December 2015

Projects

Designed network and server-side game logic including game physics, events, and objects:

Battle Blocks, a four player 3D physics-based sandbox game where players customize and battle their block-based robot within a confined arena. Built from scratch using C++: Bullet physics engine for the physics simulation, openGL for graphics, SFML for audio, Windows Socket over IP/TCP stack for networking, and Blender for 3D modeling.

Hardware architecture and development:

KJ, a 3-stage pipelined CPU that runs on a custom 8-bit instruction set architecture and ten registers. Includes data forwarding to avoid data hazards and asynchronous reading to avoid branch hazards, resulting in no stalling nor flushing. Implemented with System Verilog.

Software engineering (Android development):

GlassMADA is a GoogleGlass application for people with Alzheimer's. Application retrieves forgotten information for the user such as the name of the person they are talking to or past events they went to. Uses Scandit framework for QR scanning and HTML5/CSS/JS for web application.

Place-It, a location-based Android app. App notifies user upon close proximity of a placed PostIt note, reminding him/her of a task to perform at the location.

Web and SQL database development, optimization, and analytics:

Retail web application for purchasing products posted by site's owner. Owner can run data analytics on product sales such as highest sales for products in a particular state. Focused on execution time; queries optimized with database indices. Built using AJAX, JSP, and PostgresSQL.

TritonLink132B, a web application replicating the backend for UCSD's course enrollment and degree system for students. Developed with MS SQL Server, Apache Tomcat, HTML/JSP web interface and JDBC connection.

Programming Skills

Languages and Technologies:

Java, C, C++, JSON, Scala, SPARC/MIPS assembly language, (System) Verilog, JavaScript, jQuery, SQL, Linux filesystem, Bitbucket/Github git repositories, Eclipse, Visual Studio, Vim

Software Development:

Requirements analysis, Agile development, object-oriented design, open-closed principle, single responsibility principle, TDD, BDD, software quality assurance

Other Experience

UCSD Sixth's Place & Market: Food service and hospitality | October 2013 – December 2015

Lead position - Facilitated task management among workers for store upkeep

UCSD's Super Sixers: Saving Society: Volunteer work and charity | September 2012 – June 2013

Logistics chairperson - Requested and managed donation raffle prizes for the Up Til' Dawn fundraiser event for St. Jude Children's Research Hospital