Sujun Zhu

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Education:

Viterbi School of Engineering, University of Southern California, Los Angeles, CA   Major GPA: 3.76
Master & Bachelor of Science, Computer Science   EXPECTED DEC 2017

Skills and Languages:

Programming Language: JAVA(main), C++, C#, C, Verilog, Python, HTML, CSS, PHP, JavaScript, Objective C, Swift
Tools: Linux, OpenGL, Matlab, OpenCV, JQuery, Bootstrap, Unity, Google Cloud, QT, Mandarin

Projects:

Facebook Search / PHP, HTML, CSS, Swift

- Developed a full-stack web service with iOS app to enhance users experience of searching and sharing Facebook users, events and groups.

Backend:

- Created a PHP server to handle HTTP GET requests and responses from clients, integrated with Facebook Graph API to get users information.
- Deployed the server side to Google Cloud to accommodate more users.

Frontend:

- Designed an interactive web page utilizing AJAX technology (HTML, CSS and JavaScript).
- Used AngularJS structural framework to dynamically display JSON responses obtained from the PHP server.
- Created a clean responsive user interface utilizing Bootstrap for compatibility on different platforms.
- Developed an iOS app with CocoaPods library (Alamofire SwiftyJSON, SpinKit, etc.) to duplicate all web functions.
- Incorporated with Core Location and Facebook SDK for iOS to allow users to get geolocation and like and share the search result on Facebook.

Multiplayer 2048 / JAVA, Group Work   Bitbucket: git@bitbucket.org/multiplayer2048/multiplayer2048.git

- Created a 2048 game with cooperate and competitive modes with 2 players on two computers.
- Designed and developed the server-side utilizing Java Sockets to establish the P2P network for hosting the joining games.
- Built the communication interface with common SQL queries for the backend to interact with MySQL database.
- Designed the backend multi-threading platform to host multiple game instances and users.
- Implemented the leaderboard and its visualization component, incorporated with the main server.

KVVS Multiplayer FPS Game/ C# & Golang, Group Work

- Developed a multiplayer first-person shooting game that players fire blobs to contaminate their enemies.
- Created a Golang load-balancer server with RESTful APIs to handle HTTP POST requests and responses.
- Managed networking efficiency (prefab transformations, prefab spawning, chats etc.) during game play.
- Implemented Voice over IP for all users to communicate with each other in gameplay using Unity low-level API.
- Designed the level of the game, part of client UI interface, and animations utilizing Unity and its assets store.

Pintos Operating System / C, Linux System

- Implemented threads, processes in kernel level, synchronization primitive and scheduler to run several threads and processes concurrently in kernel mode.
- Designed and implemented the virtual memory module to manage page faults, memory maps and memory objects efficiently.
- Resolved file naming, file protection, and provided file abstraction APIs.
- Tested and debugged the OS on Ubuntu so that it can successfully run user-level code and service system
- calls.

Roller-Coaster 3D Simulation / C & OpenGL core profile

- Wrote a program that simulates the ride experience from first-person angle.

- Designed and implemented high-level interactive UI (speeding up, look upward or downward, etc) and low-level details (layout, rendering, import/export, performance, etc.)
- Converted 3D splines into train's track and made the view angel follow real-time tangent of the spline.

Research:

USC Database Lab, Data Engineer   **Summer 2016**

- Built the Matlab tool to collect and provide visualization of the data of patients movement.
- Implemented the interpretation and correction toolbox to clean and process the data.
- Developed and performed series of test cases for the models, improved the tests coverage to 90%.