Fangcheng Zhu

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OBJECTIVE

- To obtain fulltime position in software engineering for December 2017

EDUCATION

Carnegie Mellon University Pittsburgh, PA
M.S. in Mechanical Engineering Expected Dec. 2017
- GPA: 3.90/4.00
- Relevant Coursework: Computer Networks, Storage Systems, Distributed Systems, Computer Systems, Data Structures for Application Programmers, Client Side/Enterprise Web Applications, Machine Learning

University of California, Los Angeles Los Angeles, CA
B.S. in Mechanical Engineering, Focus Area in Computer Science Jun. 2015
- GPA: 3.93/4.00, Summa Cum Laude, Dean's Honors List for multiple quarters
- Membership: Tau Beta Pi@UCLA

TECHNICAL SKILLS

- **Programming Languages**: Java, C/C++, JavaScript, PHP, HTML/CSS, Python, MATLAB
- **Frameworks/Libraries**: Laravel, Qt, Bootstrap, AngularJS, MySQL, OpenGL, GLSL

ENGINEERING PROJECT EXPERIENCE

Two-phase Commit for Group Photo (Java) | Carnegie Mellon University May. 2017
- Implemented a 2-phase commit photo system to publish group collages assembled from multiple contributors
- Achieved robustness to lost messages and to node failures/reboots using customized operation logging protocol

Scalable Cloud Service (Java) | Carnegie Mellon University Mar. 2017
- Designed a 3-tier simulated cloud service to handle browse and purchase requests for a simulated online store
- Increased system efficiency by dynamically scaling front/middle tiers separately based on real-time demands

File-Caching Proxy (C, Java) | Carnegie Mellon University Jan. 2017 – Feb. 2017
- Constructed a low-latency distributed file system that allows concurrent remote clients to perform standard C file operations on a remote server through caching proxies
- Built an RPC protocol in place of C library to let unmodified programs access the remote service over TCP
- Reduced latency and data transfer by implementing a LRU cache on proxy with one-copy semantics

Superlime – A Cross-platform Java Cloud IDE (Qt) Feb. 2017 – Apr. 2017
- Designed a client side development tool for editing and running Java programs without having to install JDK
- Deployed a long-running TCP server that could process concurrent client compilation requests on Amazon EC2

Dynamic Storage Allocator (C) | Carnegie Mellon University Nov. 2016
- Implemented a general purpose dynamic storage allocator for C programs to support malloc, free, realloc, and calloc functions, as well as a comprehensive heap checker to ensure proper alignment of the heap region
- Optimized usage rate using segmented explicit list to allocate memory space, and improved throughput with modified first-fit policy to search for memory blocks

Simple Linux Shell (C) | Carnegie Mellon University Oct. 2016
- Constructed a basic Linux shell that supports job control, I/O redirection, foreground-background job status switch, and automatic zombie child process reaping
- Installed SIGCHLD, SIGINT, and SIGTSTP signal handlers to avoid race conditions between different tasks

COURSE SUPPORT

TA for 24780 Engineering Computation C++ | Carnegie Mellon University Aug. 2017 – Present
- Assisted Prof. Yamakawa with in-class discussions, proctored for exams and graded assignments/exams
- Held online Q&A sessions and weekly office hours to help students with homework problems