EUGENE LUO

Contact

eug@cmu.edu
813-220-4989
github.com/eyluo
eyluo.github.io

Skills

Languages:

- C
- Python
- Go
- SML
- ASM (x86-64, ARM)
- Scala
- SystemVerilog

Tools:

- GDB
- Redis
- GRPC
- Proto Buffers
- Nginx
- Git
- Bash/Zsh
- MacOS
- Linux
- Windows
- Simics

Coursework

Completed:

- 15-410: Operating System Design & Implementation
- 18-349: Introduction to Embedded Systems
- 15-213: Introduction to Computer Systems
- 15-210: Parallel & Sequential Data Structures & Algorithms
- 15-150: Principles of Functional Programming
- 18-240: Structure/Design of Digital Systems

Current:

- 15-440: Distributed Systems
- 18-500: ECE Capstone
- 18-794: Pattern Recognition Theory

Education

Carnegie Mellon University

Pittsburgh, PA | Expected Graduation May 20

M.S, B.S. Electrical & Computer Engineering

- GPA: 3.65/4.00
- College of Engineering Dean's List F16 S17, UAA All-Academic Recognition

Experience

Microsoft

Software Engineering Intern | Sunnyvale, CA | May 19 - Aug 19

- Designed and implemented a generic distributed infrastructure to maintain state and session information within an Application Gateway instance.
- Integrated extension into Application Gateway module to support latency-based load balancing, observing 40% speed-ups over thousands of server requests.

Carnegie Mellon School of Computer Science

15-213: Computer Systems Teaching Assistant | Pittsburgh, PA | Aug 18 - May 19

- Taught computer system concepts including x86-64 machine code, dynamic memory allocation, processes and threading to 60+ students over two recitations.
- Led office hours and large group review sessions for 200+ students.

15-112: Fundamentals of CS Teaching Assistant | Pittsburgh, PA | Jan 17 - May 18

- Taught foundational CS principles such as Big-O analysis, recursion, and OOP in recitations.
- Mentored 50+ students in project design for final term project and Hack112.

Honey Science Corporation

Product Engineering Intern | Los Angeles, CA | May 18 - Aug 18

- Drafted data quality standards for store information by analyzing SQL queries.
- Updated Google Cloud Spanner databases by adding new fields based off of aggregated data.
- Revised data pipelines to access new database information.
- Updated storefront search results to meet new design standards.

Projects

BoulderOS/Avalanche

Partner Project for 15-410: Operating Systems | Spring 19

- Wrote a kernel in C based on the x86-IA32 architecture. Supports high-frequency preemption, multiprocessing, multithreading, and virtual paging to run C programs via virtual console interfaces.
- Modified the kernel to create a hypervisor for para-virtualizing simple "guest" kernels.

Raft Consensus Algorithm

Project for 15-440: Distributed Systems | Fall 19

- Implemented the Raft consensus algorithm in Go with a custom RPC package to simulate network failures. Demonstrated consensus for hundreds of commands across 10+ servers.

Poze API

PennApps | Fall 19

- Built an API that utilizes AWS Rekognition to provide quirky photo prompts as an alternative form of two-factor authentication.

Activities

Orientation Leader

Carnegie Mellon Office of Orientation | Aug 17 - Aug 19

- Trained and directed Orientation Counselors to introduce first-year students to Carnegie Mellon.
- Organized informational seminars, dorm events, and move-in for first-year students.

Varsity Swimmer

Carnegie Mellon University | Aug 16 - Oct 18

- 2017 UAA Conference Team Member.