Anatol Liu

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EDUCATION

Carnegie Mellon University
Class of 2018
B.S. in Computer Science

Coursework
15-213 Computer Systems
15-251 Great Theoretical Ideas in CS
15-150 Functional Programming

SKILLS

Python
C
Javascript
Java
Ruby
HTML/CSS
jQuery
node.js
Flask
Swift
Unix
LaTeX
Semantic UI

EXPERIENCE

Lockheed Martin - Software Engineering Intern
Rockville, Maryland, Summer 2015
Built web frontend and web queries to database of an application that provided big data visualizations to IT companies.

Roaring Fork - Developer
Pittsburgh, PA, Summer 2015
Wrote web scraper and parser to collect patent information and store inside a remote database. Made use of regex to increase reliability. For a startup based in civil cases.

HCII - Undergrad Researcher
Pittsburgh, PA, Fall 2015
Conducts research regarding how using technology as a lens for communication influences how communicants perceive each other.

PROJECTS

MallocLab
Wrote a memory allocator based on segregated lists. Achieved an increase from 48 to 16000 kops/sec, and 70% to 94% space utilization from the CSAPP malloc. Written in C.

CacheLab
Wrote a program to simulate cache behavior as a program executes. Also wrote a matrix transpose function optimized for the cache. Reduced cache misses from ~4500 using a naive nested for loop, to 1227 for a 64x64 matrix. Written in C.

PianoScribe
Created an app that transcribed piano onto sheet music and allowed for user playback. Used fast fourier transforms and analyzed signal envelopes. Written in Python.

SmartCan
Part of a team that created a smart trash can at PennApps capable of sorting items based on recyclability. Won Best Use of Intel Edison award. Used node.js, Intel Edison, MongoDB, and iOS.

Sonnetify
Built a synthesizer that, after several user played notes, would start to play a harmony alongside the user. Used a simple Markov Chain. Built with Arduino and hand-crafted pressure sensors.