MichaelRecachinas

student, software engineer by day, electrical engineer by night, opera singer in the shower

about

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programming

Python, C/C++
JS, OCaml, Rust,
Java, HTML5, CSS3

frameworks

Flask, Node.js, iOS
Android SDK

interests

PL theory/compilers
machine learning
neural networks
computer graphics
computer vision
NLP
full-stack dev
front-end dev
quantum computing

education

since 2012 — **University of Virginia** MS in Electrical Engineering — Expected Spring 2015
Concentration in RF/Microwave Engineering
Current GPA: 3.8

2010-2014 — **University of Virginia** BS in Electrical Engineering — Graduated May 2014
Triple Major in Electrical Engineering, Computer Science, and Physics
Minor in Applied Mathematics
Overall GPA: 3.2

experience

2014 - now — **Axios, Inc.** Software Engineer — Dulles, Virginia
Taught a lecture on functional programming to the interns and other engineers. Built a client-side web application using HTML5/JavaScript/CSS3 to stream live data from a server via WebSockets. Building an internal functional JS library.

2013-2014 — **WillowTree Apps** Software Developer Intern (WebApps) — Charlottesville, Virginia
Rewrote an open source library for Backbone.js and Marionette.js; Built a Mixin pattern into Backbone.js; Built IRC bots that aided with internal task automation (included sentiment analyzer).

05-08/2013 — **Scitor Corporation** Program Manager Intern — Chantilly, Virginia
Developed risk reduction package for multi-million dollar next-generation memory unit for National Reconnaissance Office satellite. Built iOS application.

activities

12-05/2014 — **University of Virginia** Teaching Assistant — Charlottesville, Virginia
Instructed labs, graded homework and exams, held recitation and contributed to course material.
Courses: Data Structures, Computer Graphics, Graduate Microwave Engineering, and Graduate Microwave Engineering Lab.

2010-2012 — **University of Virginia** Athletic Department Tutor — Charlottesville, Virginia
Tutored Calculus I, II, III, Differential Equations, Statistics, Probability, Intro Programming, Software Development, Discrete Math, Digital Logic Design

projects

2014 — **BeerToCats.com** — Final Project for Operating Systems
Implemented histogram of oriented gradient (HOG) feature detection and trained a support vector machine (SVM) classifier in Python to detect solo cups, cans, and bottles, ultimately covering them up with a random image.

2014 — **COOL Interpreter & Compiler** — Programming Languages
Built the lexer, parser, semantec analyzer, interpreter, x86-64 compiler, and optimizer for an object-oriented pedagogical language using primarily OCaml.

2013 — **MindFlow** — Capstone Project
Integrated pressure sensor and Bluetooth microprocessor into hydrocephalus shunt; Developed Android application to collect pressure readings and perform predictive modelling of failure rates using stochastic neural networks.

2012 — **Image Processor with Built-in Raytracer** — Computer Graphics
Built a command-line version of "The Gimp" in C++ with Beier–Neely morphing; Added raytracing functionality; Optimized raytracer using bounding volume hierarchies; Added scene interactivity with OpenGL.