

Objective

My goal is to be in an engineering position where I can network with fellow programmers, accumulate new skills and gain a real world perspective on my future profession. I hope to establish relationships with fellow peers and explore career opportunities in a productive community.

Skills

- Four+ years of independent programming experience in Java
- Fluent in JavaScript, CSS, HTML using libraries like AngularJS, JQuery, and Bootstrap
- Work experience with full stack development and JetBrains IDE suite
- Experience with Scala, Python, C, C++, x86 Assembly (NASM), and Linux/Unix
- Experience with Spring, Maven, Gradle, Selenium, Bootstrap, and OpenGL
- Windows, MacOS, Word, Excel, PowerPoint
- Excellent oral and written communication skills

Work Experience

Software Engineer Intern

6/2018 – 9/2018

Paxata - Enterprise Analytics Software Company

Redwood City, CA

- Worked on master to improve consistency of main application & enforce expected behavior through bug fixes
- Fixed a widespread performance issue with data manipulation relating to lack of parity between frontend and backend object representations
- Fixed a performance issue with version loading relating to multiple unnecessary server calls from the frontend

Full-Stack Software Engineer Intern

7/2017 – 9/2017

Paxata - Enterprise Analytics Software Company

Redwood City, CA

- Used Agile to develop a landing page feature for the existing application that expedites common workflows
- Designed Scala APIs and AngularJS interfaces that query MongoDB for metadata on prioritized data/projects
- Implemented JUnit integration tests using Selenium to define expected system behavior for the new landing page

Education

Bachelor of Science in Computer Science

9/2016 – Present

University of California – Santa Cruz

Santa Cruz, CA

Currently pursuing a Bachelor of Science in computer science at UCSC. Junior level student in Fall 2018. GPA: 3.97

CMPS 109: Advanced Programming

Spring Quarter 2018

University of California – Santa Cruz

Santa Cruz, CA

Distributed parallel password cracker for UNIX salted passphrases. Reliable distributed parallel MSD Radix sorter. Configurable test harness for geometric bounds checking. Multithreading, distributed computing, TCP, UDP, and Berkeley socket communication. Focus on C++.

CMPS 102: Introduction to Analysis of Algorithms

Spring Quarter 2018

University of California – Santa Cruz

Santa Cruz, CA

Divide-and-conquer, greedy algorithms, dynamic programming, min-cut max-flow, Big-O runtime analysis, algorithmic proof of correctness, and LaTeX.

Programming Projects

- (in progress) ShutterMate: a chess board digitizer and move recommendation assistant – OpenCV, ResNet227, Keras
- Handwritten digit classifier – self-coded neural network, backpropagation, supervised learning, MNIST
- Checkers AI – Negamax algorithm, 12-ply depth search, piece table and move value heuristic, alpha-beta pruning
- SlugMenu: an app to see the nutritional info of what's cooking at the UCSC cafeterias – Electron, Node.js, web-scraping
- HousingConnect: an online marketplace for renting out apartments – Firebase, Bootstrap, secure web authentication token
- OpenGL / WebGL – model loading, GLSL, graphics pipeline, texture blending, lighting, specular maps
- Java Breakout game using the JavaFX API – bloom, blur and glow effects, animations, screen shake, level designer
- Music visualizing LED strip with Arduino – asynchronous serial communication, Fast Fourier Transform, beat detection

(GitHub repository: <https://github.com/AlexPetrusca>)