Carlos Flores

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Objective

4th year Computer Science major at UC Berkeley seeking for a software engineering or software development position at a company with a challenging and collaborative work environment.

Work Experience

Teaching Assistant for CS10 (December 2014 - Present)
CS10, also known as the Beauty and Joy of Computing, is an introductory course to Computer Science for non-majors at UC Berkeley. The class focuses on "big ideas" of computing, such as abstraction, recursion, concurrency, and the limits of computing. Having taught this class has given me the ability to communicate complex computing ideas to students who don't have programming experience.

Teaching Assistant for Level Playing Field Institute (August 2016 - Present)
The Level Playing Field Institute is an organization committed to eliminating the barriers faced by underrepresented people of color in science, technology, engineering and math (STEM). I work as a teaching asistant teaching Computer Science Principles, and AP Computer Sicence to high school students from the Bay Area.

Software Engineering Intern at Fanatics Inc. (June 2015 - August 2015)
I interned for Fanatics, a sports retail company that powers the e-commerce websites of all major professional sports leagues. I worked on different projects, a sales visualization using Carto (a maps framework) and generating keyword suggestions through Google's AdWords API and Keyword Query Reports. This internship gave me insight into the volumes of data that are handled in real world applications. Most of my projects included working with thousands of sales data points and being able to process them efficiently.

Teaching Assistant for CS61B (January 2016 - May 2016)
I taught the well known course Data Structures at UC Berkeley. The class is taught in Java, and is concerned with tradeoffs between time and memory for structuring data, as well as engineering moderately large programs.

Projects

Secure File Storage (Python)
I worked on implementing a secure file storage system on a malicious server. We deviced a secure storage scheme consisting of AES symmetric encryption, and HMAC for file content authentication. The project consisted of being able to store files and share between different users. Furthermore, it included revokation of shared files, as well as fast updates to existing files. We implemented fast file updates by keeping a log of edits as well as a base file image.

Neural Network for MNIST dataset (Python)
I wrote a 1-hidden layer neural network to predict a handwritten digits (MNIST) database. I managed to get 97% on a 40,000 image test set.

NBA Finals Sales Visualization (Jquery, CSS, Carto)
During my internship at Fanatics I worked on creating visualizations on a map of the recorded sales by the warriors and cavaliers during the 2015 NBA Finals. This project gave me experience on translating data into something that we could interpret.

Filesystem extension for Pintos Operating System (C)
I worked on implementing file growth for a filesystem. The filesystem used Unix-like file allocation, using an inode and direct, indirect and doubly-indirect pointers to allocate memory.

Decision Tree and Random Forests (Python)
I wrote a decision tree and random forests module to predict if someone has an annual income greater than $50k. I used data from a census to do the training, the data set included numerical and categorical data.

Upper Division Couse Work

- CS189: Machine Learning
- CS188: Artificial Intelligence
- CS170: Algorithms and Intractable Problems
- CS162: Operating Systems
- CS161: Computer Security

Programming Languages

- Working knowledge in **Python, Java, C** and **Javascript.**
- Basic knowledge in **HTML, CSS, SQL, Unity** and **Xcode**

Other

- Fluent in English and Spanish
- Origin: Mexicali, Baja California Mexico