Carlos Flores

B.A. in Computer Science, University of California at Berkeley

graduation date: May 2017

Info

carlos.flrs@berkeley.edu | github: carlosflrs | linkedin.com/in/carlosflrs | http://carlos.codes

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.

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.

NBA Finals Sales Visualization (Jquery, CSS, CartoDB)

During my internship I worked on creating visualizations on a map of the recorded sales by the warriors and cava- liers during the 2015 NBA Finals. This project gave me experience on translating data into something that we could interpret.

Stock-learning (Python)

The goal of this project is to create a multi-agent program that sweeps through stock data and makes different predictions. We have set up a server with years of historical data and have a written a python module as an inter- face with our server. I'm working on different agents for clustering, and predicting overall trends.

Work Experience

Emarketing Intern at Fanatics Inc. (June 2015 - August 2015)

I interned for 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 CartoDB (a maps platform) 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 millions of sales data points and being

Undergraduate Student Instructor for CS61B (January 2016 - May 2016)

I taught 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.

Undergraduate Student Instructor for CS10 (December 2014 - Present)

I teach the Beauty and Joy of Computing 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 people who don't have programming experience.

Computing Skills

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

Upper Division Classes

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