Bijan Oviedo

CONTACT INFORMATION

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EDUCATION

University of Chicago, Chicago, IL

B.S. in Computer Science, B.A. in Economics, Expected June 2018 **Sep 2014 – present**

Cumulative GPA: 3.60/4.00

Selected Coursework: Machine Learning (Graduate Level), Parallel Computing, Computer Architecture, Algorithms, Discrete Math, Linear Algebra, Probability Theory

EXPERIENCE

UChicago Department of Computer Science, Chicago, IL

Teaching Assistant **Jan 2017 – present**

Teaching assistant for Introduction to Computer Science at the University of Chicago. Assist professor with teaching over 50 students C syntax, basic algorithms, and fundamental programming topics. Duties include grading and holding weekly office hours.

Google Applied CS with Android, Chicago, IL

Student **Oct 2016 – Nov 2016**

Practiced data structures and algorithm implementations through game development in Android Studio. Collaborative project development with the support of Google facilitators.

Becker Friedman Institute for Research in Economics, Chicago, IL

Economics Research Assistant **Mar 2015 - Jun 2015**

Collected behavioral economics data on ongoing, large-scale field experiment at Chicago Heights Early Childhood Center under Professors John List and Anya Samek. Assessed effects of increased parental involvement on test scores of disadvantaged youth in Chicago through statistical analysis using R.

PROGRAMMING PROJECTS

ARMv8 Instruction Set Simulator 5-stage pipelined ARMv8 Instruction Set simulator, capable of running the 40 most common ARMv8 instructions. Supports data and control dependency handling, branch prediction, L1 instruction and data caches, and multicore functionality. Written in C.

Sentiment Analysis of Beer Reviews Large-scale classification of three million beer review comments from `ratebeer.com` as positive, neutral, or negative using an ℓ_2-regularized logistic regression classifier and mini-batch stochastic gradient descent. Achieved 22% error rate vs. 67% random classifier expected error rate. Written using Python and Apache Spark.

Dynamic Job-Scheduling Simulator Multi-threaded simulation of a queue-based job-scheduling algorithm running on multiprocessor/multicomputer systems. Uses randomized and statistical load-balancing decisions to achieve 2x speedup over lock-free algorithms under exponentially-distributed workloads. Written in C using Pthreads API.

High-Performance Concurrent Hash Tables Concurrent hash table implementations including (i) a fine lock closed-address hash table that has linked lists located at each hash index and (ii) a completely lock-free hash table using only built-in synchronization primitives like GETANDSET(). Written in C using Pthreads API.

myPlanner for UChicago iOS app that allows UChicago students to determine how many classes away they are from completing other majors or minors. Written in Swift 3 using Firebase for authentication and storage of user data.

All of my projects can be seen at `https://github.com/bgoviedo`

SKILLS

Languages: C/C++, Python, Swift, R, ARMv8 Assembly, LaTeX
Technologies: Git, SVN, Apache Spark, Xcode, Android Studio, Firebase
Environments: macOS, Windows, Linux, iOS, Android