Asha Anoosheh

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Education

University of California, Berkeley (Graduation due May 2016)
Bachelor of Science, Electrical Engineering & Computer Science (EECS) GPA: 3.72

Work and Research Experience

Berkeley Institute for Data Science *Undergraduate Research* (Jan 15 – present)
- ❖ Using Torch to implement the Graph Neural Network for use in advanced traffic prediction
- ❖ Web scraping, storage, analysis, and learning of textual and image data from various commodities of interest

Google / Nest – Palo Alto, CA *Software Engineering Intern* (May – Aug 2015)
- ❖ Created backend for an internal tool for automating mobile app UI alteration and exploration
- ❖ Helped develop a page-object framework for self-navigating Android, iOS, and web applications

National University of Singapore *Undergraduate Research* (Aug – Dec 2014)
- ❖ Researching approximate computing using floating-point precision tuning and its effects on FPGA performance

NVIDIA – Santa Clara, CA *Software Engineering Intern* (May – Aug 2014)
- ❖ Worked on Android Platform Team to customize, debug, and add features to AOSP framework for Nvidia devices
- ❖ Implemented region-based package management, a custom file manager, and a filesystem for external storage

Intertrust Technologies – Sunnyvale, CA *Software Engineering Intern* (Jun – Aug 2013)
- ❖ Developed an NFC security library and application on Android platform for internal company projects

Skills & Knowledge

- *Programming*: C, Python, Java, C++, CUDA, OpenCL, Ruby, JavaScript, Matlab, R, SQL
- *Software*: Hadoop, Caffe, Torch, SkLearn, OpenMP, Node, Git/SVN, Autodesk, Multisim
- *Mathematics*: Multivariable Calculus, Linear Algebra, Differential Equations, Discrete Math, Combinatorics
- *EE & Physics*: Microelectronic Circuits, Signals & Systems; Astrophysics, QM, Relativity, Kinematics, E&M, Optics
- *Other:* Fluent in Farsi with basic knowledge of French; BSA Eagle Scout - awarded 2011

Courses and Projects

Computer Vision (in progress)
Compilers and Languages (in progress)
Computer Graphics (in progress)
Parallel Computing and Software (2015)
- Initiated a custom project to speed up large-scale distributed neural-nets via IPC reduction (and succeeded)

Image Manipulation and Computational Photography (2015)
- Assembled a pipeline for processing and identifying new supernovae using the KAIT telescope (Custom project)
- Wrote programs that automatically align, contrast, hybridize, blend, resize, carve, morph, and stitch images

Machine Learning (2015), Artificial Intelligence (2015)
- Implemented Linear/Logistic Regression, kernel methods, PCA, Neural Nets, unsupervised and scalable learning
- Implemented CSPs, MDPs, RL, Bayes Nets, GMM, HMMs, Decision Trees, and SVMs

Computer Security (2015)
- Performed buffer-overflow, DNS spoofing, SQL Injections, and XSS Injections on mock targets

Efficient Algorithms and Intractable Problems (2014)
- Learned optimization, FFT, cryptography, recurrence, graph theory, greedy algorithms, DP, complexity theory

Operating Systems and Systems Programming (2014), Database Systems (2014)
- Implemented multiprogramming in an OS via threads, schedulers, shared file system, and VM mapping
- Created both a local and network-distributed key-value store system with atomicity and concurrency
- Engineered a database server with web-client interface and backend, from scratch, for an event-booking system

Computer Architecture (2013), Structure and Interpretation of Programs (2012)
- Implemented keyword-proximity search to run remotely on Amazon EC2 servers via Hadoop
- Utilized OpenMP, SSE SIMD, and various optimizations to speed up image convolution by a thousand times
- Constructed a functioning, pipelined MIPS CPU using Logisim
- Made an interpreter for Scheme Lisp; Parsed and geographically mapped raw Twitter data
- Created a graph-based computer board game and AI player that plays based on self-pruning Minimax