Alex Kashi

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EDUCATION

UC BERKELEY
BS in Electrical Engineering and Computer Sciences
May 2017 | Berkeley, CA
College of Engineering
High Honors (Magna Cum Laude)
Cum. GPA: 3.85 / 4.0
Major GPA: 3.84 / 4.0

LINKS

Github:// **AlexKashi**
LinkedIn:// **AlexKashi**

COURSEWORK

UNDERGRADUATE CS
Introduction to Machine Learning
Operating Systems
Artificial Intelligence
Internet Architecture and Protocols
Computer Security
Efficient Algorithms

UNDERGRADUATE EE
Feedback Control Systems
Analog Integrated Circuits
Introduction to Robotics
Introduction to Embedded Systems
Signals and Systems
Microelectronic Devices and Circuits

SKILLS

PROGRAMMING
Professional Proficiency
Python • Java • Android • C++

High Proficiency
C • GraphQL • AWS • LaTeX
Matlab • Tensorflow • OpenCV

Working Proficiency
Qt • ROS • C#

AFFILIATIONS

2016 Camp Kesem
2015 Eta Kappa Nu Electrical Engineering Honor Society (Top 25%)
2013 Academic All American (Water Polo)

AWARDS

National Intel Scholarship
Regional Silicon Valley Eng. Council
Regional Top Senior Thesis - FHS

EXPERIENCE

STANFORD GENOME TECHNOLOGY CENTER | Researcher
Sep 2017 - Present | Stanford, CA | Advisor: Prof. Ronald W. Davis & Dr. Robert Phair
Python

- Devised the first classifier for Myalgic Encephalomyelitis (ME/CFS) based on the data collected by our sensor and my feature extraction algorithm, published in PNAS
- Developed hardware and software for a low-cost impedance measurement device
- Optimized the above technologies from inception to a commercially viable product
- Designed an image segmentation algorithm to extract individual cells from SEM images
- Used CNNs to determine the distribution of blood cells for clinical diagnostics
- Manuscript submitted to MDPI Diagnostics for the metabolic & genetic origin of ME

INTEL | Software Engineer
Jun 2017 – Sep 2017 | Santa Clara, CA
C • ASL

- Improved drivers for I2C and UART interfaces, including touch screens and cameras
- Debugged BIOS ASL code adding features and configuring new peripherals
- Programmed firmware for x86 based R&D devices

ZSPACE | Software Engineering Research Intern
May 2016 – Aug 2016 | Sunnyvale, CA
Python • C++ • C#

- Utilized CNNs to design a gaze tracking system compatible with polarized 3D glasses
- GPU accelerated using the Theano machine learning framework
- Trained on over 10GB of data collected from 36 participants on a proprietary data collection application
- Classified test images from infrared cameras in real-time

INTEL | Undergraduate Technical Intern - Client R&D
May 2015 – Aug 2015 | Santa Clara, CA
Java • C++ • C

- Architected a MapReduce framework for local big data processing on Android devices
- Developed parallelized framework using the Android NDK in native C/C++
- Created an application for my framework by implementing k-means clustering to preprocess location data locally before sending the result to the server
- Effectively reduced server storage requirements and average query time

PROJECT EXPERIENCE

FULL-STACK ANDROID DEVELOPMENT
Java • GraphQL • AWS

- Designed fully featured Android social networking application from the ground up
- Back-end designed using AWS amplify, deployed with Serveless Framework
- DynmoDB NoSQL database streamed to Elasticsearch over Lambda for handling geospatial and full-text queries
- Authentication and security provided by AWS cognito, and IAM roles
- Caching and loading data from the back-end using android architecture components

LOW-COST RELIABLE LOCALIZATION OF DRONE
Python

- Created a low-cost highly redundant alternative to a Vicon Motion capture system that enables indoor aerial delivery via drone
- Reduced the cost by only requiring a standard HD webcam and an array of AR tags
- Acquired a single pose estimation with the ROS package ar_track_alvar and used MAVROS to communicate with the Pixhawk PX4 2.4.8 flight controller

PUBLICATIONS | Stanford

Healthcare • Nano-electronics Biosensor • Machine Learning • Artificial Intelligence
Esfandyarpour R., **Kashi A.**, Nemat-Gorganib M., Wilhelmy J., & Davis R. (2019). A nanoelectronics-blood-based diagnostic biomarker for myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). Proceedings of the National Academy of Sciences.