Alex Kashi

alexkashi.github.io/
akashi@berkeley.edu
aakashi@stanford.edu
408-431-1273

EDUCATION

UC BERKELEY

BS in Electrical Engineering and Computer Sciences
May 2017 | Berkeley, CA
Cum Laude
College of Engineering
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 • Matlab • LaTeX
Theano • OpenCV
Working Proficiency
TensorFlow • Qt
ROS • C# • x86

TOOLS

Unix • Vim • Git
Cadence • Eclipse

AWARDS

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

EXPERIENCE

Last Updated on 25th June 2018

STANFORD GENOME LAB | Researcher, Department of Biochemestry

September 2017 - Present | Stanford, CA | Advisor: Prof. Ronald W. Davis
Python

- Researched ways nanosensors can help diagnose and treat people with chronic fatigue syndrome (ME/CFS)
- Generated and analyzed impedance data from our biosensor to classify ME/CFS patients vs healthy controls
- Developed and validated circuit models to explain the bio-electric system
- Interviewed and hired graduate students for RA positions
- In process of writing research paper to submit to refereed journals

ZSPACE | Software Engineering Research Intern

May 2016 – Aug 2016 | Sunnyvale, CA
Python • C++ • C#

- Utilized deep convolutional neural networks to design a gaze tracking system compatible with polarized 3D glasses
- GPU optimized using the Theano machine learning framework
- Trained on over 10GB of data collected from 36 participants on a proprietary data collection application
- Processed and classified images from infrared cameras in real time

INTEL | Undergraduate Technical Intern - Client R&D

May 2015 – Aug 2015 | Santa Clara, CA
Java • C++ • C

- Implemented a general solution to local big data processing on Android devices
- Realized an application of the generalized map reduce framework with k-means clustering to reduce the local data footprint on servers
- Full stack development from the NDK to IPC to UI
- Parallelized using Pthreads and insured thread safety using mutexes

PROJECT EXPERIENCE

LOW COST RELIABLE LOCALIZATION OF DRONE

Python

- Objective to create a low cost alternative to a Vicon Motion capture system to enable indoor aerial delivery via quadrotor drone
- Only requires a standard HD webcam and an array of AR tags, thereby facilitating total cost reduction
- Multiple AR tags rigidly connected to an origin tag provide redundancy, allowing for rigid body transforms to locate the quadrotor in global coordinates
- Acquired a single pose estimation with the ROS package ar_track_alvar and used Mavros to communicate to the Pixhawk PX4 2.4.8 flight controller

ARTIFICIAL INTELLIGENCE | Various Techniques for a Pacman AI

Python

- Q-learning, value iteration, policy iteration, and policy extraction to determine which action Pacman should take given state-actions pairs
- Bayes nets for inferring data about ghosts with super powers
- Hidden Markov models used to track invisible ghosts using particle filtering
- Minimax with alpha-beta pruning and A* path finding with consistent heuristics

PRESENTATIONS, PROCEEDINGS, AND PAPERS

Esfandyarpour, R., Kashi A., Wilhelmy J., Cervantes L., & Davis R. W. A Low-cost, Blood-based Diagnostic for ME/CFS. Poster session presented at: Inflammation, Aging and Chronic Disease; 2017 November 27-28; Stanford, CA.

AFFILIATIONS

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