ASHWIN MUTHUKUMARASAMY

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EDUCATION   SAT: 2360

University of California, Berkeley   **2015 – 2018 (Expected)**

B.S. in Electrical Engineering and Computer Sciences

Relevant Coursework: CS61C: Machine Structures in C, **IEOR 165:** Engineering Stats, Quality Control, Forecasting, **CS61B:** Data Structures in Java, **EE16B:** Designing information systems and devices 2, **CS70:** Discrete Math and Probability Theory, **CS184:** Foundations of Computer Graphics, **M101JS:** MongoDB with Node.JS, **M233:** MongoDB with Apache Spark

Programming Languages and Skills:

Java, Python, C++, C, HTML, CSS, OpenGL, Scheme, Android Development, SQL, MongoDB, Node.js, Distributed Databases (Sharding and Replica Sets), Scala, Numpy, scikit-learn, Pandas

Certifications:

M101JS: Completed in top 10% and invited to be course teaching assistant

EXPERIENCE

Berkeley Computer Vision Lab - AI Research Intern   **January 2015 – October 2016**

- Utilized DJI's iOS SDK to write an iOS application connecting devices to drone to access real-time views from the mounted camera
- Testing path-finding with depth-imaging and point-space data in real-time image reconstructions
- Developed efficient and secure means of data transparent transmission to push all data from each flight-log into our servers

Ezinagro – Android Frontend Developer   **September 2015 - Current**

- Streamlined groups-based decision making using Android Studio and decreased the average meetup planning process by more than 20% in focus group studies
- Implemented Yik-Yak style voting feed for groups to visualize the trends on each logistical component of a meetup
- Executes material design with visual calendar widget from Android Studio as well as local user authentication
- Download here: https://play.google.com/store/apps/details?id=com.timeslot.timeslot

San Diego Supercomputer Center – Visual Computation Intern   **June 2014 – August 2014**

- Designed post-processing CT scan visualization using PERL seed-bombing
- Algorithm operation up to 38% faster than proprietary OsiriX software
- Utilized the novel implementation of Open PCL and MATLAB as showcase on CBS 8 interview

Google – Corporate Consultant   **August 2016 – December, 2016**

- Collaborated with Mountain View's Android Wear team to analyze the feasibility of targeted product growth
- Spearheaded actionable marketing strategy through data analytics from homegrown polls and focus groups
- Prototyped product design using SVG graphics as well as viable features for campaigning in the next product cycle
- Inspired the product marketing campaign of https://magicminute.withgoogle.com

PROJECTS

Machine Learning - Yelp Dataset Challenge   **January 2017**

Queried Yelp academic challenge data set using Apache Spark ML and MongoDB, developed a Scala based recommendation engine utilizing ALS technique to train and re-train the program. Used resulting best fit to understand the preferences of a user review rating and predict what the user would have rated other similar businesses. Key MongoDB native connector features used included those such as pre-filtering, co-location, partitioning, scale out computing to drive performance and scalability. Recommendations are saved in MongoDB and then rendered to a browser request using frameworks of express.js and angular.js.

Data Science – New York Housing Market   **January 2017**

Used Pandas, scikit-learn, and seaborn to analyze various points of reference in the housing market via a CSV file of hundreds of thousands of homes. Collected the most densely saturated histograms and checked the effect of independent variables such as # of bedrooms and square footage on housing prices using ordinary least squares. After collecting the OLS report card I used seaborn to plot the linear regression and affirm that square footage, # of bedrooms, grade of land, and housing condition were most correlated to the prices in New York, with a strong weightage on the number of bedrooms.

HOBBIES & ACTIVITIES

Interests

Urban exploration, learning to cook new cuisines, eating new cuisines, alternative R&B and melodic electronic music

Hackathons

HackJam – Wrote the AnonChats website with team in the span of 8 hours