Sumukh Shivakumar

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Education

University of California, Berkeley, Berkeley, CA August **2015 – Present**
B.S. Electrical Engineering & Computer Science
Relevant Coursework:

- EE/CS: Artificial Intelligence, Efficient Algorithms and Intractable Problems, Python/Scheme/SQL, Data Structures, Machine Structures, Signals/Systems
- Math: Probability Theory and Discrete Math, Multivariable Calculus, Linear Algebra & Diff. Equations

Skills

Proficient in Java, Python, C; **Familiar** with Perl, JQuery, SQL, HTML/CSS/JavaScript
Technologies: Git, Adobe CC, Android Studio, IntelliJ

Experience

UC Berkeley - Drona: Undergraduate Researcher **August 2017 – Present**

- Developing a Programming Framework, Drona, for building reliable distributed mobile robotics systems
- Applying reinforcement learning to drone motion planning under Prof. Sanjit Seshia

Verizon Communications Inc: Software Developer Intern in Network Systems **Summer 2017**

- Designed/Developed an internal framework using ELK Stack for the Dynamic Network Manager, providing Verizon employees real time usage analytics to better understand enterprise customers & resolve tickets
- Reduced ticket handling latency from 24 hours to ~60 mins.
- Patented a Machine Learning Algorithm to optimize 5G Antenna placement

Mobile Developers of Berkeley: Android Developer **2017 - Present**

- Led a team of 4 to design, develop, & publish Android App *Preserve*, a smart grocery management system
- Develop numerous Android applications at UC Berkeley's Premier Mobile Development Organization

UC Berkeley IEEE: Technical Operations Officer **2017 - Present**

- Maintain servers throughout the UC Berkeley EECS Department.
- Migrating current server infrastructure to cloud based storage using Amazon Web Services

Stanford University / Robot Perception and Action Lab (USF): Undergraduate Researcher **May 2016- Dec 2016**

- Automated robot cooking tasks using a Functional Object Oriented Network.
- Optimized Robot Task awareness through NLP and WordNet
- Further enhanced automatic understanding of cooking events using YouTube cooking videos, using Computer Vision. Focused on Video Event/Object detections for network training under Dr. Yu Sun

UC Berkeley EECS Department: Lab Assistant **Jan – May 2016**

- Assisted over 20 students a week through Python projects/lab assignments, with office hours & tutoring

Projects

- Preserve (Java/Android): Grocery tracker that notifies users when food items expire using OCR technology with Google Mobile Vision API, Firebase database, and intuitive UI/UX
- Verizon 5G Antenna Placement **(**Python/ML**):** Automated 5G antenna placement using Machine Learning to optimize for geographical location, 5 different antenna types, cost, and coverage.
-MDB Socials **(**Java/Android**):** Helps students plan/host social events & see who's interested in attending. Made use of Firebase Database/Storage/Authentication, and maintained user friendly UI.
***-Apache Spark Video Compression*:** Implemented a scheme using Discrete Cosine transform to perform Video Compression using Apache Spark & OpenCV

Honors

UC Berkeley – College of Engineering – Dean's Honor's List
1st Place - Verizon Company Wide Intern Hackathon 2017
Mu Alpha Theta – National Math Honor Society – National Scholarship Recipient
Academy of Applied Sciences Distinguished Scholar – Published paper on Nanomechanic drug delivery to the brain