Divyashish Kumar

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EDUCATION

University of California, Berkeley Expected Dec. 2019
Bachelors of Science in Electrical Engineering and Computer Science (EECS) *GPA: 3.80*
- **Relevant Courses**: Data Structures, Discrete Math and Probability Theory, Structure & Interpretation of Computer Programs, Efficient Algorithms and Intractable Problems, Computer Architecture, iOS Development, Intro to Machine Learning, Intro to Databases System, Principle & Techniques of Data Science
- **Honor Societies:**
  - EECS Honors Program - Top 0.03 % of EECS Undergraduate Class
  - Etta Kappa Nu (HKN) - Top 25% of EECS Undergraduate Class

PROFESSIONAL EXPERIENCE

UC Berkeley: Electrical Engineering & Computer Science Department Berkeley, CA
Machine Learning Research Jun. 2017 – Present
- Identified pumice rafts to track underwater volcanic eruption by training a machine learning classifier
- Constructed positive and negative training data 6 sets from 100,000+ satellite images
- Located previously unidentified pumice rafts by applying trained classifier to 20+ regions of interest

UC Berkeley: Engineering Student Services Berkeley, CA
PREP CS61A (Structures & Interpretations of Computer Programs) Instructor Jun. 2017 – Aug. 2017
- Served as a CS instructor for the Pre-Engineering Program for 20+ incoming students majoring in EECS
- Taught an accelerated "boot camp" version of UC Berkeley's CS61A course to prepare and familiarize students with the core concepts (environment diagrams, functional programing, recursion, etc.) of the CS61A

UC Berkeley: Electrical Engineering & Computer Science Department Berkeley, CA
EECS Research Intern Jun. 2015 – Aug. 2015
- Quantified alloys that would generate the optimal amount of spin current by analyzing 20+ metal alloys
- Evaluated magnetization dynamics of a 3-layer ferromagnetic system by developing simulations from scratch

PROJECTS

Constraint Satisfaction Solver *Languages and Technologies: Java, SAT4J, Maven*
- Designed a constraint satisfaction solver for an NP hard optimal ordering satisfaction problem

Performance Programming *Languages and Technologies: Python, SIMD (SSE), openMP, git*
- Achieve a 120x speedup through loop-unrolling, cache blocking, SIMD instructions and parallelizing computation using OpenMP to speed up a python library for matrix operations

Bear Maps *Languages and Technologies: Java, git, Maven*
- Implements the A* algorithm to design and construct the back-end API of a web-based application that displays a map of Berkeley and supports scrolling, zooming, and route finding (similar to Google Maps)
- Achieved higher functionality by including location searching and search autocomplete

SQL Database *Languages and Technologies: Java, git*
- Developed a smaller version of a relational database management system, as well as a Domain Specific Language with which a user can interact

AWARDS & HONORS

The Academic Achievement Award – (Presented in May 2016 to 50 out of 5000 UC Berkeley students   May 2016
- Scholarship based on academic achievement, community service

The Leadership Award – (Presented to 100 out of 5000 UC Berkeley students) Dec. 2016
- A one-year, merit-based scholarship that recognizes undergraduate students at UC Berkeley who demonstrate innovative, initiative-driven leadership impacting their academic, work, or community environments

MVP of NASA Community College Aerospace Scholars Program – (Presented to 1 out of 40 Scholars)   Apr. 2014
- Recognized for exceptional performance, leadership and communication in a professional team setting

SKILLS & INTERESTS

Technical Skills: Java, Python, SQL, Scheme, C, Scheme, RISC-V, Swift, MatLab
Interests: Cooking, Golf, iOS Development Learning New Programming Languages, and Weight lifting
Languages: Hindi and Punjabi (native born Fluent), Spanish (Proficient)