Eashaan Katiyar

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Education

University of California, Berkeley *Berkeley, CA*

B.S. in Electrical Engineering and Computer Science | GPA: 3.7 *Aug. 2017 - May 2021*

- Technical Coursework: Efficient Algorithms and Intractable Problems, Intro to Artificial Intelligence, Data Structures, Computer Architecture, Discrete Math and Probability Theory, Databases, Structure and Interpretation of Computer Programs, Designing Information Devices and Systems I & II

Skills

Languages Python, C, Java, Perl, PostgreSQL, Scheme, Javascript

Tools Git, Vim, Latex, GNU Make, Heroku, Android Studio, Bootstrap, Flask, Jupyter

Experience

Intel Corporation *Santa Clara, CA*

Design Automation Intern *May. 2019 - Aug. 2019*

- Built a GNU Make-based workflow system in perl for running regressions for testing pre-silicon designs which vastly accelerated regression runtime and turnaround relative to the old system
- This system also included modules to run performance analysis as well as automated regression verification
- Using this new system, executed multiple regressions for new versions of clock domain cross- and low power- checking tools, eventually centrally installing them to be used by all design teams
- Overhauled indicator scripts that checked for design readiness regarding faults with asynchronous clock crossings

neurIOT *Gurugram, India*

Technical Software Intern *Jun. 2018 - Aug. 2018*

- Worked on an application that extracted fashion features from sunglass images (shape of lens, colors of frame, etc.) in order to predict future sales of potential designs using a ML model
- Used OpenCV and scikit-learn to conduct image classification and feature extraction
- Conducted software demos of this application in presentations and meetings with third-party clients

Space Technologies at Cal - AI Rover Team *Berkeley, CA*

Member *Feb. 2019 - Present*

- Work on an RL model to navigate rovers on extraterrestrial soil for exploration and resource collection
- Simulated a rover as an agent within a Markov Decision Process with improvements through Proximal Policy Optimization using OpenAI Gym and simulated through ROS Gazebo

University of California, Berkeley *Berkeley, CA*

Course Projects *Aug. 2017 - Present*

- Built an interpreter for the Scheme language in Python
- Built Linked List and Array variants of the Java Deque Interface, with a focus on comprehensive JUnit testing to ensure a functional end product
- Created a multi-level 2-D dungeon crawler game, building pseudo-random world generation algorithms and a front-end graphical interface. Developed understanding in encapsulating and packaging java files for large-scale distribution
- 3-man team built voice-controlled car utilizing RC filters, bipolar junction transistors, closed-loop feedback control, and voice-recognition through implementation of PCA and k-means

Projects

TL;DW (Lecture Summarizer)

- Wrote an application that shrinks webcast length by removing non-important sections of lecture using a sumy lex rank model for summarization and a RNN for sentence boundary detection in free-run speech. Built in Python, deployed through Flask.

Reddit Recommends

- Built a website that aggregates online community product reviews into an easy-to-use web app. Written in Python, utilizing Flask, and nltk to conduct sentiment analysis