Sohum Hulyalkar

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EDUCATION

University of California, Berkeley Graduation Date: **Spring 2022**
Bachelors in Computer Science GPA: **4.0 (/4.0)**
Relevant Coursework: Data Structures (`CS61B`), Linear Algebra (`MATH54`), Efficient Algorithms (`CS170`), Probability & Random Processes (`EECS126`), Databases (`CS186`), Operating Systems (`CS162`), Artificial Intelligence (`CS188`), Machine Learning (`CS189`), Deep Learning (`CS182`), Computability & Complexity (`CS172`)

WORK EXPERIENCE

Lead Instructor | UC Berkeley May 2021 - August 2021
- Worked full time to teach UC Berkeley's summer iteration of Data Structures and Programming Methodology [CS 61BL](#) with 450+ students as one of the three lead instructors.
- Delivered weekly lectures, created course content (e.g. exams, projects, quizzes, labs, and worksheets), managed internal and external course logistics, and developed course infrastructure (e.g. website and Gradescope).
- Oversaw a course staff with 15 Teaching Assistants, 17 Tutors, and 80 Lab Assistants.

Researcher | Hybrid Systems Laboratory November 2020 – August 2021
- Worked in the [Hybrid Systems Laboratory](#) to research energy efficient path planning algorithms for routing autonomous platforms in time varying ocean currents.
- Adapted A* graph search in Python by hijacking ocean currents to minimize energy expenditure.
- Used multi-objective black box optimization libraries to find the Pareto front with minimal function evaluations.

Software Engineering Intern | Intuit May 2020 – August 2020
- Worked with a team of seven to build a native iOS application from scratch and released it for alpha testing.
- Practiced efficient and scalable coding practices by developing reusable modules, implementing a Model-View-ViewModel (MVVM) pattern and optimizing graphQL queries.
- Started with no Swift experience and became proficient after learning UIKit, completion handlers, and protocol oriented programming.
- Adopted an agile workflow and learned the production pipeline with frequent code reviews and pull requests.

Teaching Assistant (20 Hour) | Data Structures, UC Berkeley January 2020 – May 2022
- Lead exam writing, debugging, and grading, and spearheaded the adoption of [PrairieLearn](#) for online assessments.
- Recorded 80+ exam and discussion [video walkthroughs](#), averaging around 400 views per video.

Software Engineering Intern | Dolby Laboratories May 2019 – July 2019
- Worked on Android software development in Java using Android Studio.
- Built a Python tool from scratch to plot the duration of subprocesses and events from logs of a video file.
- Improved the tool to highlight anomalies, accurately display multi-threading, zoom in on a subprocess' maxima, and added support for IOS and Windows platforms.

PROJECTS

Online Escape Room June 2020
- To foster creativity and social interaction in the pandemic, I created an [online escape room](#) from scratch featuring self-made, never-before-seen puzzles that now has 10,000+ of plays.

Hidden Message | *Java*, *Spring Boot, Javascript, HTML, CSS* June 2019
- Wrote a randomized algorithm in Java that accepts a list of words and a message and creates a wordsearch such that the untouched letters spell the given message.
- Published the project as a stand-alone [web application](#) using a Spring Boot Framework.
- No existing algorithm comes anywhere close in correctness, either adding random letters after the hidden message or often failing to produce a wordsearch satisfying the given specifications.

SKILLS AND AWARDS

Languages: Python, Java, Swift, C, SQL, Html, CSS, Assembly, YAML, MATLAB, Javascript
Developer Tools: Git, Docker, Visual Studio Code, PyCharm, IntelliJ, XCode, Sourcetree, Android Studio
Awards: [2021-2022 EECS Outstanding TA Award](#), [2020-2021 Outstanding Graduate Student Instructor](#), Upsilon Pi Epsilon CS Honor Society (Top 30%), Los Gatos High School Salutatorian