ROHAN CHILUKURI

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SUMMARY

A diligent and responsible student of Computer Science and Applied Math at UC Berkeley in search of a software engineering or data science internship in Summer 2021. Strong academic credentials with a current GPA of 3.936, and course work in Computer Science, Mathematics, and Statistics. Professional experience includes four software engineering internships and an independent research project on stock market timing.

EDUCATION

University of California, Berkeley, California — Class of 2022
B.A. Computer Science/Applied Mathematics, GPA 3.936 (current)
Current/Past Coursework: Optimization Models, Numerical Analysis, Computer Security, Efficient Algorithms and Intractable Problems, Principles and Techniques of Data Science, Artificial Intelligence, Computer Architecture, Data Structures, Linear Algebra, Discrete Math and Probability Theory, Linear Algebra and Differential Equations, Multivariable Calculus

Menlo-Atherton High School, Atherton, California — Class of 2018
High School Diploma, GPA 4.0 (Unweighted) / 4.4 (Weighted)

EXPERIENCE

Adobe — May 2020 – Aug. 2020
Cloud Computing Intern: Designed and developed a new web application to efficiently monitor and diagnose issues in Adobe's Global Administration Console, which provides large companies the ability to create, edit, and visualize the allocation and use of Adobe products across their administrative hierarchies.

- Created a new "super user" role to enable secure access to the Spring Boot backend system and the underlying data models of the Console, and implemented data retrieval APIs for the new web application's use.
- Developed a React web application to provide insight into the operation of the Console, including organization and management of the allocation and use of Adobe products, highlighting of data discrepancies across various systems that the Console relies on, and displaying both customer and backend views of the data models.
- Created bash scripts to automate deployment and maintenance of the application on Amazon Cloudfront and Amazon S3.

Silicon Valley X-Ray — May 2019 – Aug. 2019
Software Engineering Intern: Designed and developed a software application for graphically displaying and reviewing the results of various image processing algorithms. The application is part of a new semiconductor chip inspection system that is being developed by the company.

- Programmatically generated various diagrams in C#, such as an image-stitched view of the semiconductor chips and a location map of the associated solder pins, based on the inspection algorithm to graphically represent and demystify the outputs of the algorithms.
- Applied thresholds, heat maps, box plots, scatter plots, and other such numerical summaries and data interpretation techniques in C# to clarify algorithm results, and implemented per solder pin review of defect classifications to accelerate review of algorithm accuracy and algorithm development.
- Developed a Graphical User Interface (GUI) using Windows Presentation Foundation for using the review tool.

Silicon Valley X-Ray June 2018 – Aug. 2018

Software Engineering Intern: Designed and developed a MongoDB database for efficient storage, search, and retrieval of X-Ray images and associated meta-data of semiconductor chip solder pin connections and defects. The database is part of a new semiconductor chip inspection system that is being developed by the company.

- Set-up MongoDB database with collections of JSON files, and implemented indexed queries and programmatic database management in C#.
- Developed C# routines using OpenCV to generate solder pin features from chip images, and comparing those pins across different chips using contour detection and other such image processing techniques. Also prepared formatted training and compute data sets for the system's machine learning algorithms.
- Developed a Graphical User Interface (GUI) using Windows Forms for using the functionality of the database.

Independent Research Project Sept. 2017 – Jan. 2018

Stock Market Timing Research: Analyzed and compared returns from a simple buy-and-hold strategy with seven different market-timing strategies utilizing 147 years of monthly market data to determine whether successful market-timing is consistently possible and what an optimal investment strategy should be for a normal investor.

- Collected monthly S&P Composite Index, dividends, earnings, and 10-year US T-bill data from 1871-2017.
- Developed a Python program to compute and compare investment returns for a simple buy-and-hold S&P Composite strategy and seven different market-timing strategies for a given time period as well as for every interval of a specified investment horizon during that time period.
- Summarized project findings in a report, and uploaded it to GitHub along with the Python program for public consumption (https://github.com/RohanChilukuri/stockmarketresearch).

Siembra Mobile Inc. June 2017 – Aug. 2017

Software Engineering Intern: Developed the tools, processes, and a framework for testing this education technology company's cloud-based service which helps improve college attendance among high school students by connecting them with school counselors and college recruiters.

- Developed a Python program to fabricate large test datasets for testing overall system scalability/performance.
- Developed a test framework with Protractor to automate system testing with the test datasets.
- Tested the test framework by creating and running a subset of the overall scalability/performance tests.

SKILLS / INTERESTS

Programming with Python, Java, C#, C, JavaScript, Lisp, RISC-V, HTML/CSS, React, Bash
Upsilon Pi Epsilon Member (UC Berkeley CS Honor Society)
Teaching (TA at UC Berkeley, Code Coach at theCoderSchool)
Bowles Hall Residential College Social Events Coordinator
Machine Learning and Data Science with PyTorch, TensorFlow, Scikit-learn, Pandas, MapReduce, Spark
Image Processing and OpenCV
Database design with MongoDB, and SQL
Proficiency with Microsoft Office and Google Suite
Recreational Golf, Tennis, and Music (Tuba)