Lakshay Soin

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Education

University of California - Berkeley Expected Graduation: May 2026

Applied Math & Computer Science, B.A *GPA: 3.73*

Relevant Coursework: Intro to Data Science, Multivariable Calculus, Linear Algebra, Real Analysis, Discrete Math, Structure and Interpretation of Computer Programs, Algorithms and Data Structures, Abstract Algebra, Abstract Linear Algebra, Principles and Techniques of Data Science, Complex Analysis, Numerical Analysis, Partial Differential Equations

Experience

Software Engineering Intern June 2021 – August 2021

Tech For Good Inc *Boston, MA*

- Collaborated with a team of 30+ interns to create an ML powered cloud optimization engine for small businesses
- Developed a RESTful API using Java Spring Boot with a GET request to parse JSON input from the ML engine and created a POST request to automatically create a cloud instance
- Used Docker and Kubernetes to ensure 100% availability of spot instances in GKE

Research Externship July 2022 – August 2022

Cisco Systems Inc *San Jose, CA*

- Researched how YOLO object detection and deep SORT machine learning algorithms contributed to the development of self-driving vehicles
- Investigated the mathematics behind the object mapping of LiDAR's 128+ sensors and evaluated its cost opportunity vs Computer Vision in a 50+ slide presentation
- Presented to 30+ Cisco employees about the future outlook for autonomous vehicles and how they can integrate these ideas in their connected cars project

Competitive Programming October 2021 – Present

United States of America Computing Olympiad (USACO) *Online Competition*

- Used Java to solve challenging algorithmic based problems involving graph theory (BFS/DFS/Flood Fill), binary search, queues/stacks, heaps, dynamic programming, greedy algorithms, etc.
- Advanced to the exclusive USACO Gold division with a score of 833/1000
- Ranked amongst the top 1000 pre-college students in the United States and top 2000 competitors

Projects

UFC Analytics | *Python, Machine Learning, Selenium, Logistic Regression, React JS* November 2024 – Present

- Created a Logistic Regression model to predict upcoming UFC fights with 78% accuracy compared to betting odds that predict at around 68% accuracy
- Investigated the relationship between UFC wrestlers and strikers determining how different styles impact outcome of the fights
- Created an ELO rating system for fighters to determine skill level based on the level of competition they faced throughout their career
- Automated predictions for future fights by extracting upcoming fight data from the UFC website

StreamEasy | *Python, Flask, Selenium, Docker, SQL, React JS, React Native* June 2024 – September 2024

- Developed a song streaming service for both web/mobile use with React js/React Native frontend
- Used Python Selenium to webscrape Spotify playlists and download up to 1000+ songs onto a Docker container
- Persisted user specific playlist data with SQL to save 15+ minutes of downloading time
- Pushed code via Git for public use through cloning the repository

Technical Skills

Languages: Java, Python, C++, HTML/CSS, Javascript
Frameworks: SpringBoot, React JS, React Native
Developer Tools: Git, Docker, Kubernetes, Google Cloud Platform, Vim, SQL
Libraries: Pandas, Numpy, Matplotlib, OpenCV, Selenium, Seaborn, Flask, Matplotlib, Scikit learn