Rohan Kalra

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EDUCATION

Viterbi School of Engineering, University of Southern California, Los Angeles, CA. GPA: 4.0 — Class of 2024
Thomas Jefferson High School for Science and Technology, Alexandria, VA. GPA: 4.42 — Class of 2020
Course work: Data Structures, Object Oriented Programming, Software Development, Algorithms, Artificial Intelligence, Computer Vision, Multivariable Calculus, Linear Algebra

SKILLS

- **Programming**: C++, Python, Java, JavaScript, TypeScript, HTML/CSS, LaTex
- **Frameworks/Environments/Tools:** React/React Native, Node.js, Express, Postman, Selenium, AWS, Sequelize
- **Machine Learning and Data Analytics**: Reinforcement Learning (Q-Learning), Jupyter Notebook/Lab, SciKit-Learn, Pandas, NumPy, Matplotlib, SQL (MySQL, Postgres),
- **Project Management:** Agile Thinking, GitHub Flow, Code reviews

EXPERIENCE

Amazon — Incoming Fall 2022

- Software Development Engineer Intern

CarbonLink Inc. — May 2022 – Current

- Writing backend functionality using Node.js/Express for the CarbonLink exchange to support USD/carbon-backed ERC-20 tokens exchange requests using PrimeTrust's API.
- Using Selenium Web Driver to create two Python web-scrapers that maintain AWS Database and allow for key carbon-credit functionality such as retirement and interaction with the CarbonLink bridge.
- Ideating for a Secondary Carbon Marketplace feature on the CarbonLink platform (algorithms for Order-Matching engine, infrastructure, etc.).

Sawbuck — August 2021 - Current

- Leading the development of a cross-platform mobile application that allows fans to invest in their favorite hip-hop artists using social tokens
- Developing the front end of the cross-platform application using React Native and Expo CLI
- Have conducted 28 user interviews to learn more about the users' primary pain points
- Presented market research and demos of the application to a crowd of 200 people at LavaLab's demo night

Simple Robinhood — March 2022 – April 2022

- Created a React.js web application that allows the user to view up to date price information on a list of stock tickers
- Setup a Node server to handle API requests to a fake "NASDAQ" API called SimdaqAPI
- Used Express and Node.js to create the SimdaqAPI (full CRUD functionality) and used Postman to properly test the API

RESEARCH

Computational Intern, Computational Cognitive Neuroscience Lab, Harvard — July 2019 – April 2020

- Researched theories regarding how learning agents make decisions probabilistically in states of uncertainty
- Presented code at weekly standups to share progress with lab members in an agile development environment
- Developed probabilistic Q-Learning models to explore idea of Belief State-based decision-making
- Applied Computational Models to real-world data from cognitive studies being ran on mice
- Found evidence mice were making decisions probabilistically in behavioral paradigms when faced with uncertainty

Computational Intern, Princeton Social Neuroscience Lab, Princeton — June 2019 - July 2019

- Led a study to learn how "psychological distance" from a recipient affects an individual's donation behavior
- Calculated psychological distance metric based on measurable values such as difference in geophysical location, education level, income bracket, etc. (2000000 data points. Worked with Pandas, NumPy, Matplotlib, SciKit-Learn)
- Discovered "psychologically closer" donors and recipients yield higher likelihood of donation interaction, with no significant effect on amount donated

ACTIVITIES

USC LavaLab (Director of Recruitment, Executive Board) — December 2021 - Present

- Serve on the Executive Board of the University of Southern California's premiere, student-run, product incubator
- Develop the primary talent acquisition strategy to admit a cohort of 28 visionary designers, developers, and project managers every semester
- Mentor a team of four students and help guide them through launching a product/project from scratch

HONORS AND AWARDS

- Dean's List @ USC (2022, 2021), National Merit Scholar, National AP Scholar (2020), Toshiba/NSTA ExploraVision: 95th Percentile for proposing a system to target neurodegeneration with miRNA exosomes using quantum genetic algorithms (2019).