

Rohan Kalra

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Education

University of Southern California

Bachelor of Science, Computer Science and Business Administration | GPA: 4.0

Los Angeles, CA

Aug 2020-May 2024

Thomas Jefferson High School for Science and Technology

Advanced Studies Diploma, Neuroscience Senior Research | GPA: 4.42

Alexandria, VA

Sep 2016-Jun 2020

Relevant Coursework: Data Structures, Algorithms, Object Oriented Programming, Software Development, Artificial Intelligence, Computer Vision, Multivariable Calculus, Linear Algebra

Skills: C++, Java, Python (Selenium, Pandas, NumPy, Matplotlib), Javascript (React, React Native Node.js, Express), Typescript (Sequelize), SQL (PostgreSQL), Postman, AWS, Agile Workflow, GitHub Flow, Jira, Google Analytics & Tag Manager

Work Experience

Amazon

Incoming Software Development Engineer Intern

Los Angeles, CA

Fall 2022

CarbonLink Inc.

Software Developer

Los Angeles, CA

May 2022-Present

- Write backend trading functionality for the CarbonLink Exchange using **Node.js**, **Express**, **PostgreSQL**, and **Sequelize**, allowing our platform to support USD/carbon-backed ERC-20 token exchange requests
- Create web-scrapers using **Python** and **Selenium Web Driver** to maintain an **AWS** Database, enabling key carbon-credit functionality such as retirement and interaction with the CarbonLink Bridge
- Lead development of CarbonLink Estimate, an emissions calculator which will eventually allow for production of the CarbonLink API, an integration for consumers to offset emissions with each individual retail purchase they make
- Develop reusable front-end components such as payment confirmation modals using **React** and **Tailwind CSS**, saved ~25 hours of frontend development time

Computational Cognitive Neuroscience Lab, Harvard University

Computational Intern, Professor Samuel Gershman

Cambridge, MA

Jul 2019-Apr 2020

- Researched theories regarding how learning agents make decisions probabilistically in states of uncertainty, presenting findings at weekly standups with technical team
- Developed 2 probabilistic Q-Learning models in **Python** to explore idea of Belief State-based decision-making, laying groundwork and initial codebase for future lab members to use and build upon
- Found evidence mice were making decisions probabilistically in behavioral paradigms when faced with uncertainty, visualizing results using **Matplotlib**

Social Neuroscience Lab, Princeton University

Computational Neuroscience Intern, Professor Diana Tamir

Princeton, NJ

May 2019-Jul 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 using **Pandas**, **NumPy**, and **Matplotlib**, working with 2,000,000 data points in analysis
- Discovered "psychologically closer" donors and recipients yield higher likelihood of donation interaction, with no significant effect on amount donated

Projects

- **Stock Dashboard (Mar 2022):** A dashboard that lets users view up to date information for a list of stock tickers. Used **React** for frontend and **Express/Node.js** to create backend API, testing it using **Postman**
- **Sawbuck (Dec 2021):** A cross-platform mobile application built using **React Native**, allowing fans to invest in their favorite hip-hop artists using social tokens. Presented market research and demos of application to a crowd of 200 people at LavaLab's demo night. Accepted into TroyLabs Accelerator @USC (Jan 2022)
- **Four Color Theorem (June 2021):** A visualization tool built with **C++** to explore the Four Color Theorem, which states "no more than four colors are required to color the regions of any map so that no two adjacent regions have the same color"

Leadership

USC LavaLab

Director of Recruitment, Executive Board

Los Angeles, CA

Dec 2021-Present

- Serve on the Executive Board of the University of Southern California's premiere, student-run, product incubator
- Develop primary talent acquisition strategy to admit a cohort of 28 visionary designers, developers, and project managers every semester, helping to produce 7 early startup teams
- Mentor a team of 4 students and guide development and launch of product from scratch