Saransh Saini

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EDUCATION

University of California, Berkeley · Overall GPA: 3.8 — **Berkeley, CA**
B.A. Computer Science, B.A. Applied Mathematics — *Class of 2023*
· Courses: Data Structures, Software Engineering Principles, Efficient Algorithms, Computer Architecture, Structure of Computer Programs

PROFESSIONAL EXPERIENCE

The NeuroBat Lab — **Berkeley, CA**
Machine Learning Engineer — *September 2021 · Present*
· Design neural networks to understand the nuances and meaning behind vocalization patterns in the Egyptian fruit bat.
· Collaborate with lab bioengineers and neuroscientists to verify validity of ML insights, iteratively tweaking model parameters in response.

UC Berkeley EECS Department — **Berkeley, CA**
Academic Teaching Intern — *June 2021 · August 2021*
· Facilitated labs by instructing students on core CS fundamentals such as object-oriented programming, recursion, hashing, graph traversal, and programming paradigms.
· Improved upon course plans that reach 2000+ students a year by completing student facing assignments and providing feedback on how they can be improved.

Quiver Quantitative — **Milwaukee, WI**
Software Engineering Intern — *October 2020 · April 2021*
· Independently built multiple data gathering and cleaning scripts in Python that would later become the first version of the core Python library used by the company.
· Iteratively optimized the API fetching logic by incorporating Python Collections and data structures to reduce the number of API calls needed to fuel the dashboards the company creates.
· Built a database using the Stack Overflow API to present trends in tech popularity amongst developers.

IEEE Berkeley — **Berkeley, CA**
Software Developer — *September 2020 · May 2021*
· Kickstarted the development of an enhanced web version of a Pictionary-like game in the projects team at IEEE Berkeley.
· Brainstorm, planned, and collaborated with a team of students to iteratively improve upon the existing UI and codebase, ultimately writing cleaner, more functional code.
· Focused on understanding the interplay between user-facing components and backend networking that creates seamless multiplayer experiences.

PROJECTS

Piano Typer — *In Progress*
· Picked up the piano during the online school year but couldn't figure out how to practice sheet music by myself.
· Incorporated the built-in browser MIDIAccess API with React to create a simple plug-and-play interface, making it easy for anyone to connect their piano to a computer and independently learn foundational piano skills.
· Continuously planning advancements that will increase utility (adding chords, scales, and virtual keyboard support is on the horizon).

Gitlet — *February 2021*
· Recreated the Git version control system entirely from scratch in Java to better understand Git and application planning.
· Implemented all core features (add, commit, merge, reset, push, pull, fetch, checkout, branch).
· Optimized file reading, writing and storage using serialization, hashing, and the File system

MERN Geolocation App — *December 2020*
· Social media web app that allows for users to share places with friends using MongoDB, Node, Express, and React.js.
· Connected to the Google API and Firebase to provide full location and authentication services.
· Fortified my ability to program large applications with many working parts, while also augmenting my understanding of database integration, user experience, and authentication

Reddit Personality Assessment Bot — *September 2020*
· Accessed IBM Watson Sentiment Analysis Services to analyze a Reddit user and return a report on that user's personality based off their Big 5 Personality Traits, needs, values, and consumption preferences.
· Mention any user in a Reddit comment and the bot will access the user's comment history to perform its judgement

SKILLS

Languages: Python · Java · SQL · Ruby · JavaScript · HTML/CSS · Git · C
Stack: Numpy · Pandas · React.js · MongoDB · D3.js