# Saransh Saini

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## EDUCATION

**University of California, Berkeley**                     **Berkeley, CA**

B.A. Computer Science, B.A. Mathematics, 3.8 GPA                    *Class of 2024*

**Relevant Coursework:** Data Structures, Discrete Math and Probability, Linear Algebra, Structure of Computer Programs, Multivariable Calculus

## SKILLS

**Languages:** Python, Java, SQL, JavaScript, HTML

**Analytics/Technologies:** NumPy, Pandas, D3.js

**Web/Media:** React.js, React Native, Express.js

## EXPERIENCE

**UC Berkeley Electrical Engineering and Computer Science Department**          **Berkeley, CA**

*Academic Teaching Intern*                         *June 2021 · Present*

· Facilitate labs by instructing students on core CS fundamentals such as object-oriented programming, recursion, hashing, graph traversal, and programming paradigms.

· Improve 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**                          **Edison, NJ**

*Software Engineering Intern*                    *October 2020 · January 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.

**The Daily Californian**                         **Berkeley, CA**

*Data Analyst*                          *September 2020 · January 2021*

· Analyzed data with Python and used D3.js to create models and visualizations.

· Accelerated the data gathering process using APIs pertinent to the given article (Noble Prize API, City of Berkeley Database)

## PROJECTS

**Piano Typer**                          *August 2021*

· Created an easy way to practice your sheet music reading skills.

· Simply plug a MIDI-capable piano into your computer, and practice identifying and playing keys based off sheet music.

· An exciting project with great scope for improvement (adding chords, scales, and virtual keyboard support is on the horizon).

**Gitlet**                          *February 2021*

· Recreated the Git version control system entirely from scratch, entirely in Java.

· Implemented all core features (add, commit, merge, reset, push, pull, fetch, etc).

· Optimized file storage and version control using serialization, hashing, and the File system.

**Procedural Rogue-Like Game**                          *April 2021*

· Designed an algorithm to create a valid 2D Zelda-like map using binary space partitioning based off the user inputted seed.

· Implemented loading and saving, enemy movement, easter-eggs, and dashing.

**Sketchy.io @ IEEE Berkeley**                    *October 2020 · May 2021*

· Developing an enhanced version of a Pictionary-like game with a team of students from IEEE Berkeley.

· Built the front end with React.js/CSS/HTML and backend with Node and WebSockets.

· Focused on understanding the interplay between user-facing components and backend networking that creates seamless multiplayer experiences.

**MERN Geolocation Social Media 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 understanding of the File System, database integration, and authentication.