

# Ritam Chakraborty

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## EDUCATION

### University of California, Berkeley

Berkeley, CA

Bachelor of Arts in Data Science

- **GPA:** 4.0
- **Relevant Coursework:** Principles and Techniques of Data Science, Data Structures, Foundations of Data Science, Structure and Interpretation of Computer Programs, Linear Algebra & Differential Equations
- **Student Organizations:** Piedmont Consulting Group, Space Enterprise at Berkeley

## SKILLS

**Languages:** Python, Typescript, Javascript, SQL, Java, HTML, CSS, Dart, R

**Libraries:** Pandas, NumPy, Matplotlib, React.js, Next.js, Flask, FastAPI, Tensorflow, Sklearn, Flutter

**Developer Tools:** Git, Anaconda, Jupyter Notebook, VS Code, IntelliJ, Android Studio, Vim

**Financial Relevance:** Data Pipelines, Quantitative Modeling, Financial Data Analysis, LLMs for Finance

## EXPERIENCE

### SomeIdea AI

Berkeley, CA

Software Engineer Intern

03/2025 – Present

- Compiled financial data from F500 companies into a tree schema, stored in vector database for efficient retrieval
- Built a Python script generating 500 ground truth equity reports to fine-tune a domain-specific financial agent
- Developed an MVP React chat interface enabling users to query the LLM for real-time equity research insights

### Balnce AI

Remote

Machine Learning Consultant

01/2025 – 05/2025

- Fine-tuned multiple large language models (LLMs) for entity extraction, improved extraction accuracy by 25%
- Engineered data generation and validation pipelines to produce 1,000+ synthetic data rows for fine-tuning
- Automated testing pipelines for 50+ LLM parameter combinations, reducing manual tuning time by 80%

### UpUnikSelf

Remote

Frontend Developer Intern

01/2025 – 03/2025

- Crafted and edited 50+ interactive React.js components, contributed to a 20% increase in user engagement
- Optimized data latency speed and API calls by 40% through dynamic rendering and efficient data querying
- Designed intricate layouts for 30+ pages and managed server computing and caching to improve user experience

### Space Enterprise at Berkeley

Berkeley, CA

Simulations Team Member

09/2024 – 12/2024

- Improved the organization's wind speed sampling technique for rocket launching simulations through finding correlations between the launch site average wind speeds at 47 different altitudes on 164 different days
- Formulated quantitative models to predict wind speeds for nearby altitudes, increased accuracy by 18%
- Migrated a Data Analysis GUI to Next.js + FastAPI, reduced data processing time by 30% during launches

## PROJECTS

**Equinet** | Javascript, React.js, Next.js, Node.js, TailwindCSS, Firebase

- Built a financial-tech platform enabling investors to discover, analyze, and connect with private equity funds
- Designed a secure investment dashboard with portfolio tracking and investor-fund manager matching
- Released a prototype to a group of angel investors and partnered fund managers to integrate user feedback

**Image Recognition for Medicine Package Quality Control** | Python, Pandas, NumPy, Matplotlib, Sklearn, Tensorflow

- Leveraged edge detection for feature extraction and transfer learning for optimizing deep learning algorithms
- Compared efficacies between Convolutional Neural Networks (CNNs) and common machine learning classifiers
- Published methodology and recommendations for future implementation in an academic journal as sole author

**Coefficient of Determination ( $R^2$ ) Visualizer** | Javascript, HTML, CSS

- Composed an educational website to visually demonstrate how  $R^2$  is calculated for two variable data in statistics
- Constructed a user interface that enables users to plot points on a plane to be utilized for statistical modeling
- Transferred website to a high school Advanced Placement Statistics teacher to teach  $R^2$  to 100+ students per year

**Uno** | Java

- Recreated Uno with a complete graphical user interface (GUI) and game mechanics using custom animations
- Created local server and client handler so close by users using separate systems can play a single game together
- Instituted a multithreaded server environment to read/write data streams so UI accurately updates for all clients

**Retro Game Chrome Extension** | Javascript, HTML, CSS

- Migrated classic arcade games in a small browser extension window for simple and convenient user access
- Devised artificially intelligent (AI) opponents from the ground up and manually refreshed animation frames