Ritam Chakraborty

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EDUCATION

University of California, Berkeley **Berkeley, CA**
Bachelor of Arts in Data Science

- **GPA:** 3.96
- **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: Java, Python, Typescript, Javascript, SQL, HTML, CSS
Frameworks & Libraries: Spring, React.js, Next.js, Vue.js, Flask, FastAPI, Pandas, NumPy, TensorFlow
Tools & Platforms: Git, IntelliJ, VS Code, PostgreSQL, Docker, Jupyter Notebook, Anaconda, Vim

EXPERIENCE

Software Engineering Intern **Berkeley, CA**
SomeIdea AI *03/2025 – Present*

- Generated 500+ synthetic equity research reports using Python to create training datasets for financial AI agents
- Migrated 100+ financial documents from Google Cloud to a secure PostgreSQL database in Amazon RDS
- Built an email assistant extension using NLP to extract crucial financial insights from lengthy analyst reports

Machine Learning Consultant **Remote**
Balnce AI *01/2025 – 05/2025*

- Fine-tuned LLMs for entity extraction, achieving 25% accuracy improvement over baseline Qwen performance
- Developed data generation and validation pipelines in Python producing 1,000+ synthetic training examples
- Automated testing framework for 50+ hyperparameter combinations, reducing manual tuning time by over 80%

Frontend Developer Intern **Remote**
UpUnikSelf *01/2025 – 03/2025*

- Created 50+ interactive React.js components featuring state management, API integrations, and animations
- Optimized API response times by 40% through implementation of request batching and caching strategies
- Designed responsive layouts for 30+ pages using CSS Grid and Flexbox, improving mobile user experience

Simulations Engineer **Berkeley, CA**
Space Enterprise at Berkeley *09/2024 – 12/2024*

- Analyzed wind speed data across 47 altitudes over 164 days to improve rocket trajectory simulation accuracy
- Constructed predictive models for wind speeds at unmeasured altitudes, increasing simulation accuracy by 18%
- Transitioned internal data analysis tool to Next.js + FastAPI stack, reducing launch-day processing time by 30%

PROJECTS

Portfolio Management Risk Estimator | *Java, Spring, SQL, PostgreSQL, Typescript, React.js, Next.js*

- Implemented scheduled jobs to fetch and store market data for top 50 companies into a PostgreSQL database
- Calculated portfolio risk metrics including Value at Risk using Monte Carlo simulations and Sharpe coefficients
- Built Next.js frontend for portfolio creation and risk visualization, integrated with Spring Boot REST API

AI-Powered Lease Negotiation Platform | *Typescript, Node.js, React.js, Next.js*

- Created a platform enabling renters to revise housing contracts using AI-generated suggestions and explanations
- Integrated Letta and Gemini APIs to parse legal language, generate revisions, and maintain conversation context
- Deployed a real-time collaborative contract editing interface using the Supabase Realtime Presence service

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

- Applied edge detection algorithms and transfer learning techniques to detect defects in medicine packaging
- Compared performance between trained neural networks against traditional machine learning classifiers
- Published methodology and implementation recommendations in an academic journal as the sole author

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

- Developed an interactive educational website demonstrating the R^2 calculation for two variable data in statistics
- Created an intuitive interface enabling users to plot data points and dynamically observe R^2 value changes
- Launched tool used by high school AP Statistics teachers to teach regression concepts to 100+ students annually

Uno | *Java*

- Programmed complete Uno game implementation with a GUI using Java Swing and game state management
- Engineered a local network server supporting multiple concurrent players with game state synchronization
- Implemented multithreaded client-server architecture with WebSocket for seamless multiplayer gameplay