# VARUN KIRAGI

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## EDUCATION

**Georgia Institute of Technology**                                                                 **January 2025 - April 2027**
*Master's, Computer Science*

**University of California - Davis**                                                          **September 2019 - June 2023**
*Bachelor's, Computer Science*

## PROFESSIONAL EXPERIENCE

**The Honey Jar**
*Software Engineer Intern*                                                                   *September 2024 - November 2024*
- Led the development of a Coin Flip game dApp on Berachain, integrating smart contract interactions with a Next.js frontend and Tailwind CSS, providing users with an interactive and pleasing experience.
- Optimized smart contracts for NFT projects, improving gas efficiency by 15% and increasing user interactions by 20% through enhanced dApp features and seamless blockchain integration.
- Worked with and debugged an indexer for tracking blockchain transactions, enhancing data retrieval and analysis capabilities for blockchain-based activites, resulting in improved user engagement and quest completion monitoring.

**TeamcalAI**
*Software Engineer Intern*                                                                            *May 2024 - August 2024*
- As the sole developer on this team, I engineered a cutting-edge voice assistant bot using React Native's Speech Recognition API and custom algorithms, enabling users to manage schedules via voice commands, resulting in overwhelmingly positive feedback on app accessibility
- Spearheaded bug-fixing initiatives, significantly reducing app crashes and improving overall stability
- Implemented robust error handling and monitoring practices, resulting in enhanced application performance and user experience
- Conducted regular code reviews, refactored legacy components, and introduced a comprehensive testing strategy, substantially enhancing code quality and minimizing regression bugs across multiple app releases.

**MyAIChef**
*Software Engineer Intern*                                                                          *June 2023 - March 2024*
- Optimized web scraping algorithms in Python using pandas and Beautiful Soup, achieving a 20% reduction in execution time, leading to streamlined data acquisition processes, facilitating more efficient data updates and improving system performance.
- Revamped the app's interface, done in TypeScript and React Native, enabling smooth navigation, and incorporating user friendly input features, resulting in an increase in user satisfaction.
- Successfully implemented data handling improvements, leading to a reduction in execution time, which significantly boosted system performance and overall user engagement.

## PROJECTS & OUTSIDE EXPERIENCE

**MailFind**
- Engineered a full-stack Natural Language Understanding (NLU) search engine, leveraging GPT-5 nano to deconstruct conversational queries (e.g., "Find the PDF from Bob last September") into structured JSON, enabling a multi-stage hybrid search combining Supabase filters and pgvector similarity for high-precision results.
- Architected a secure and scalable backend using Python (FastAPI), featuring a complete Google OAuth2 flow with encrypted token storage (Fernet) and an asynchronous email indexing pipeline that uses sentence-transformers for efficient, local vector embedding generation.
- Developed a polished Chrome Extension frontend with React & TypeScript, injecting a dynamic UI directly into the Gmail DOM and implementing real-time, streaming AI responses to eliminate perceived latency and create a seamless, integrated user experience.

**Stock Screener & Valuation Tool**
- Built an interactive web app using Python and yfinance API to fetch real-time stock data and display key financial metrics and price charts
- Implemented a 2-stage Discounted Cash Flow (DCF) model with customizable inputs for growth and discount rates
- Added a dynamic sensitivity analysis chart to visualize valuation shifts based on different user assumptions

**Stock Sentiment Analyzer**
- Simulated a real-time NLP pipeline for 10,000+ financial tweets/min using Spark Structured Streaming and VADER sentiment analysis
- Extracted $TICKER symbols with >98% accuracy and aggregated sentiment scores in 5-min sliding windows with <2s latency
- Designed for scalability and integration with dashboards, live Twitter feeds, and trading alert systems

## SKILLS

**Languages and Skills:** TypeScript, JavaScript, Java, Python, HTML, CSS, SQL
**Frameworks and Tools:** Next.js, React.js, Node.js, Pytorch, Tensorflow, pandas, NumPy, scikit, Tailwind CSS