ADITYA KUNTE

akunte2@illinois.edu | linkedin.com/in/aditya-kunte/ | aditya-kunte18-github-io.vercel.app/

EDUCATION

University of Illinois - Urbana-Champaign **August 2025 - May 2026**
Master's, Computer Science

University of Illinois - Urbana-Champaign **August 2021 - May 2025**
Bachelor's, Computer Science *GPA: 3.86*

SKILLS AND TECHNOLOGIES

C/C++, Go, Python, Postgres, React.js, AI, Systems

PROFESSIONAL EXPERIENCE

DSP Mutual Funds **Mumbai, MH, India**
AI Intern *May 2025 - August 2025*

- Developed a full-stack application using PostgreSQL and React.js, allowing authenticated users to view audio transcriptions, and query the database by known speakers and company names, streamlining access to organized audio data and improving review rates by 50%.
- Created and deployed a speaker diarization pipeline using FastAPI, which detected known speakers in conversations, improving the accuracy of speaker identification in audio data
- Scraped and created custom speech data from open-source resources (OpenSLR) and fine-tuned Whisper using LORA adapters, enhancing the model's performance in recognizing diverse speech patterns

CreateLab **Champaign, IL, USA**
Undergraduate Research Assistant *August 2024 - Present*

- Implemented a multi-threaded version of Python's 'pickle' module in C, improving serialization speed and efficiency
- Created a custom thread-pool implementation to manage serialization tasks at the C level, enhancing task management and performance
- Utilized GIL management and C-level synchronization to create thread-safe resource access, ensuring reliable and safe multi-threaded operations

Disruption Lab **Champaign, IL, USA**
Software Engineer *January 2024 - May 2024*

- Wrote bash scripts to automate the launch of virtual machines, collect hardware performance counter values, and reset VM state to efficiently gather data for a machine learning model specializing in malware detection, improving data collection accuracy

Centelon IT Solutions **Mumbai, MH, India**
Machine Learning intern *May 2022 - August 2022*

- Created an image web-scraper using Python's Selenium Library to efficiently collect images of credit cards, enhancing the dataset for further analysis
- Researched on developing a Generative Adversarial Network (GAN) to generate Credit Card images using machine learning.

PROJECTS & OUTSIDE EXPERIENCE

Board2Ticket - Hackillinois Hackathon (2025) Winners

- Built an OpenCV + unsupervised learning pipeline to extract and classify whiteboard text/diagrams, improving documentation accuracy.
- Designed a pydub + Whisper-based workflow to segment, transcribe, and cluster discussions by topic for faster decision-making.
- Leveraged vision-language models to add semantic context, enhancing clarity and actionability of captured content.
- Automated GitHub issue creation via REST APIs, cutting manual task creation time.

Quantitative Trading Strategy

- Identified opportunity by selecting 300 large-cap, high-volume S&P 500 stocks as the target universe for strategy development.
- Collected and organized data by retrieving 2022–2023 daily prices from Yahoo Finance API and extracting fundamentals (net income, shareholder equity) from EDGAR filings.
- Analyzed performance drivers by calculating volatility-adjusted momentum scores and ranking all stocks in the selection universe.
- Built and tested portfolios by constructing top-decile momentum portfolios, forming a systematic, data-driven equity selection framework for backtesting.

Voice Clone

- Created a marathi voice-clone after fine-tuning Meta's MMS (massively multilingual speech) text-to-speech AI model.
- Published and used a Kaggle audio dataset for training

FundHub

- Built FundHub, a free platform enabling users to chat directly with fund managers from multiple companies, addressing the lack of accessible expert interaction in the investment space.
- Engineered a Python web-scraper pipeline to extract and structure text and metadata from reputable financial news sources, ensuring a continuously updated knowledge base.
- Developed a translation and diarization system to download, transcribe, and segment YouTube videos of fund managers, enabling multilingual, speaker-specific insights.
- Implemented a LangGraph-powered RAG pipeline using Claude Haiku to deliver contextually relevant, citation-backed responses, enhancing user trust and engagement.