KURTIK APPADOO

929-373-9126 | appadook.7@gmail.com | LinkedIn | github.com/appadook | Website Portfolio

TECHNICAL SKILLS

Languages: Python, R, Java, OCaml, SQL, Javascript, Typescript, Assembly, HTML/CSS, GraphQL

Frameworks: Node.js, JUnit, React, React Native, Next.js, Express.js, Spring Boot, Flask, FastAPI

Libraries & Tools: scikit-learn, TensorFlow, Pandas, NumPy, Seaborn, Matplotlib, Pytorch, tidyverse, dplyr, ggplot2, Apache Spark, Apache Kafka

Developer Tools: Git, Github/Gitlab, Docker, AWS, GCP, VSCode, IntelliJ, Supabase, Firebase, Cursor, PostgreSQL, Postman, Rstudio, LateX, Gradle, Maven, Tableau, Logisim, Qtspim, Excel, Redis, Kubernetes, Terraform, Databricks, dbt

EXPERIENCE

Software Engineer
Aug 2025 – Present

The Akuna Group — *Remote*

- Architected end-to-end data lakehouse platform on Databricks processing real-time data sources through an apache kafka stream, implementing medallion architecture (Bronze/Silver/Gold) with dbt transformation models and 50+ engagement KPIs aligned with streaming industry standards, reducing data pipeline latency by 40%.
- Engineered high-performance ingestion framework using Apache Spark with hash-based change detection, incremental merge strategies, and 60-day discovery caching, reducing daily processing time from 2+ hours to under 25 minutes while cutting infrastructure costs by 80% through serverless-first architecture, spot instance fallback, and auto-termination policies via Terraform IaC.
- Established production-grade CI/CD pipeline using GitHub Actions and Terraform, automating dbt test validation, multi-environment deployment (dev/stage/prod), and job orchestration with health monitoring alerts, achieving 99.9% pipeline reliability and reducing deployment errors by 90%.

Chief Technology Officer & Co-Founder
Jan 2025 – Present

UCoach LLC — *Remote*

- Co-founded and led UCoach's technical and product strategy, delivering a mobile MVP connecting athletes with private coaches using React Native, Expo, Convex, MySQL, Clerk, and Stripe, establishing the foundation for a scalable two-sided marketplace.
- Built core platform capabilities including secure authentication, real-time messaging, session scheduling, and in-app payments, ensuring reliability, usability, and investor-ready quality while managing architecture and technical execution end-to-end.
- Drove business development alongside technical leadership, presenting the MVP to investors and stakeholders, securing $12.5K in pre-seed funding, and validating early product-market fit while shaping go-to-market strategy.

Software Engineer
May 2025 – July 2025

ScanGlobal Logistics — *Jamaica, NY*

- Reduced data processing time by 95% by engineering a scalable, serverless ETL pipeline using AWS Lambda, S3, and FastAPI, enabling automated merging of large data files while eliminating manual intervention through fault-tolerant design.
- Delivered a production-grade full-stack web application using React, TypeScript, and AWS, featuring a real-time event-driven architecture, responsive drag-and-drop interface, and horizontal scaling to efficiently process 10GB+ datasets with 99% reliability.
- Saved 15+ hours weekly for cross-functional teams by implementing robust ETL workflows using Pandas and infrastructure-as-code with Terraform, supporting multi-format ingestion, business rule automation, and cost-efficient cloud deployments.

Software Engineer Researcher
Sep 2024 – Jun 2025

Union College – Economics & Computer Science Departments — *Schenectady, NY*

- Built a full-stack real-time crypto arbitrage system using Flask, WebSockets, and CoinAPI, streaming BTC/USD data from 4+ exchanges with $<$200ms latency and serving a React Native dashboard with an interactive UI.
- Engineered an end-to-end data pipeline to ingest, clean, and analyze 28M+ time-series ticks using Pandas, NumPy, and SQL; applied advanced feature engineering on volatility, spread, and convergence metrics to uncover 7 recurring arbitrage strategies.
- Developed predictive ML models (Random Forest, SVM, Gradient Boosting) to forecast profitable trades with 86.04% accuracy, simulating $897K+ in trading profit across 30K+ backtested trades using a custom latency-aware Python engine and maintaining a 99.87% success rate in simulated trades.

PROJECTS

NLP for Tabular QA | **AI/ML Developer** | *Python, OpenAI API, Pandas, JSON*

- Benchmarked 6+ prompting strategies for LLMs on tabular question-answering tasks (zero-shot, chain-of-thought, code-based, etc.), improving empirical understanding of LLM performance on structured data.
- Built a modular evaluation framework using Python, OpenAI API, and Pandas to automate testing across datasets and prompt templates, increasing experiment throughput and reproducibility.
- Demonstrated that code-based prompting with execution verification outperformed baseline methods, achieving 88% accuracy in factual QA and showcasing results at an internal research forum.

EDUCATION

Union College, NY
Schenectady, NY

Bachelor of Science in Computer Science & Economics — GPA: 3.6 — *Aug. 2021 – June 2025*

Certifications: AWS Cloud Practitioner Essentials, Cloud for small business owners, Introduction to WAF, Cloud Economics for Banking, Generative AI with Diffusion Models, Confluent Apache Kafka Fundamentals, Databricks Fundamentals, Databricks for Data Engineering

Relevant Coursework: Data Structures and Algorithms, Data Visualization, Natural Language Processing, Data Mining & Machine Learning, Software Engineering, Programming Languages, Financial Analysis, Economic Forecasting, International Economics, Data Science

Honors: Computer Science, Economics, Dean's List, Omicron Delta Epsilon Alpha Beta, Order of Omega Eta Tau

Leadership: SparkLab, NCAA College Tennis, $\chi\psi$ Fraternity, $\alpha\Phi\Omega$ Service Fraternity, Order of Ω – Vice-President