Akash Dubey

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A problem-solver with a knack for identifying opportunities for improvement and conceptualizing innovative solutions. I approach challenges with a creative and iterative mindset, leveraging technologies, including AI, to deliver impactful results. My process is rooted in deep analysis and a commitment to continuous enhancement.

Education

School of Arts and Sciences, Rutgers University
Honors College, New Brunswick, NJ
B.S. Graduate Anticipated (May 2027)
GPA: 3.95 • Computer Science and Math • SAT 1580

Coursework: Tensor Networks, Systems Programming, Algorithms, Data Structures, Statistics I, Honors Calculus III & IV, Intro to Math Reasoning, Mathematical Theory of Probability, Computer Architecture, Econometrics

Activities: Quantitative Finance Club, Road to Silicon Valley Program Cohort 6, Rutgers Directed Research Reading Program (Symmetric Functions). ESL Instructor.

Professional Experience

Full-stack Software Engineer for Samaritan Scout,
Cranford, NJ, May 2023 - Aug 2024, May - Aug 2025

- *Scraped **100k non-profit sites** and extracted info with LLM structured output (OpenAI and Gemini) to create an AI-powered search engine for over **35,000 volunteer opportunities** across America*
- *Designed robust pre- and post-processing to improve ETL process to filter sites and address hallucinations cost-effectively with semantic search and checks*
- *Worked on front and back-end features for search experience with React, TypeScript, and Postgres*

Rutgers Economics Labs Research Director, formerly Team Lead, Sep 2024 - Present

- *Organized sourcing organizations, advising research, and creating scopes of work for three research teams*
- *Led a team of **5 experienced student researchers** to create a report for the NJDCA examining the impact of their spending using econometric methods*
- *Synthesized **20+ years of historical data** from various sources to extract patterns and create projections of economic funding variables*
- *Researched for the Rutgers submission to the Federal Reserve's College FED Challenge 2024, 2025*

Scarlet Sync, Founder, Jan 2025 - Present

- *Created a modern Rutgers class scheduling app with **500+ users** for classes, degree planning, and course notifications*
- *Gathered data across 4 antiquated **Rutgers** services through web scraping, reverse engineering, and LLM extraction*
- *Designed frontend to handle **2.5k classes** and **500+ degrees***

Achievements

8090 AI, Top Coder Challenge
"*Reverse engineer software using only historical data*"
5th Place

Rutgers Entrepreneurial Society
TechStart Business Pitchathon and Shark Tank
CAPS - A secure AI-powered interviewing platform.
2nd Place and 2nd Place respectively

American Statistical Association Fall Data Challenge 2023 (StackOverflow Developer Survey)
Placed Top 3 Nationally

Other Awards: Best Honors College Final Plenary Presentation (improving the Rutgers bus system through data), Awarded Dean's List Semifinalist Award in FRC Robotics

Certifications

NVIDIA Accelerated Computing in Modern CUDA C++, Oracle Exam 1Z0-811 **Java** and Exam 1Z0-006 **Database Foundations**, **Microsoft Excel Expert** and **Access** 2019

Projects

**** Available on GitHub***

Economic Series and Feature Plotter
- FRED, BLS, or yfinance series using Streamlit and Seaborn

Algorithmic trading experiments
- Developed a backtester with Pandas including limit and trailing stop order strategies, pairs trader and co-integration tester on top 50 S&P 500 stocks, and a Black Scholes calculator

Depth Estimation with stereo vision and ML models
- Report on DHP, GLPN-NYU, and stereo depth map accuracy

Other Projects: Robot code with simulation, vision, and autonomy Calculus Problem Generator, RAG Chat App, A* and Pure Pursuit Visualizers, Arduino and Raspberry Pi Gadgets, and 3D Racing Game.

Languages: Python, C++, Java, C, SQL, TypeScript, JavaScript, Bash, Kotlin, Git

Technologies: Pandas, CUDA, Scikit-learn, React, AWS, OpenCV, LLMs, NLP