Aakash Narayan

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Education

University of Illinois at Urbana-Champaign **August 2021 – May 2025**
B.S. + Master's in Computer Science, Mathematics Minor **GPA: 3.92/4.00**

- **Honors:** Grainger College of Engineering Dean's List (all semesters)
- **Coursework:** Deep Learning, Algorithms, Applied Machine Learning, Applied Parallel Programming, System Programming, Real Analysis, Combinatorics, Numerical Analysis, Logic in CS, Probability and Statistics in CS

Experience

Midas Advisory – Quantitative Research Intern **August 2024 – Present**

- Conducting fundamental research and quantitative financial analysis on universal banks in G7 countries
- Building regression-based valuation models from FRED, S&P Capital IQ, ICE, and Bank of England time series data using Mauboussin and Rappaport's *Expectations Investing* methods

GoLittleBig – Artificial Intelligence Intern **May 2024 – August 2024**

- Developed facial recognition tool using OpenCV and dlib for conference/public event registration, reducing individual check-in time from 4 minutes to 4 seconds (60x improvement)
- Created intuitive cloud-deployed web app using Django and Digital Ocean and enabled payments through Razorpay

Weatherford International – Software Engineering Intern **June 2023 – August 2023**

- Developed LLM-enabled interactive generative AI assistant for oil well data and manuals, delivering actionable insights in response to plaintext queries in under 15 seconds
- Performed vector search on natural language files using OpenAI API embeddings, LangChain, and ChromaDB
- Created full stack web application using the .NET framework for interaction with AI assistant
- Collaborated directly with the chief architect and delivered a live product demo to senior executives, generated strong interest in scaling into finance and operations sectors

National Center for Supercomputing Applications – CEESD Researcher **June 2022 – August 2022**

- Created integral calculation tools using Runge-Kutta methods for ODEs to optimize simulation runtimes of jet fueling strategies by more than 40%
- Designed automated 3D mesh re-orientation tool, eliminating the need for manual restructuring

Projects

Two Birds One Home

- Developing a web application using Flask and FastAPI, matching college students seeking semester-long leases, allowing them to secure more cost-effective housing jointly
- Leveraging PostgreSQL to manage user preferences and Pinecone to perform vector similarity search and precisely match ideal roommates and co-signees, and using Render to deploy the scalable cloud-based platform

Reverse Sudoku Constraint Solver

- Modeled Sudoku as propositional satisfiability problem to create interactive game where players remove numbers while maintaining a solvable board. Live at https://unsolve.aidanglickman.com/
- Developed parallel tree search algorithms to create valid Sudoku boards with minimal starting entries

Image to Song Generator

- Designed application to process images using Fourier transforms, mapping visual components to sounds using OpenCV and muspy
- Created GUI for application with image upload and music download functionality. Also provided user control for image processing sensitivity and various instrumentation types

Skills

Programming Languages: Python, C++, C, Java, TypeScript, Rust, OCaml
Technologies: PyTorch, TensorFlow, scikit-learn, NumPy, pandas, CUDA, OpenCV, Django, Tableau, SQL, Excel
Languages: English (native), Tamil (native), German (conversational)
Certifications: Akuna Capital University Options Trading Course