Jinay Jain

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EXPERIENCE

Independent Projects   June 2024 – Present
- Built and deployed AI applications from 0 to 1, conducting 30+ user interviews to drive product decisions
- Wrote a blog on AI, entrepreneurship, and software read by 1,000+ monthly viewers (link)
- **Select Projects:** paid Android app for musicians, LLM web scraper agent, automated AI research newsletter, LLM Chrome extension

Software Engineer   July 2023 – June 2024
Virtu Financial (high-frequency trading) | New York City, NY   June 2022 – Aug. 2022
- Developing distributed services to support fixed-income on the industry-leading trading software
- Employed garbage-free, low-latency design patterns in **Java** for millisecond-level optimization

Machine Learning Intern   June 2021 – Aug. 2021
Matic Robots | Palo Alto, CA
- Created robotic data collection pipeline to train self-supervised models and evaluate SLAM algorithms
- Implemented **Rust** concurrency patterns to deliver a **400% speedup** in 4K video and keypoint recording

Previous Roles: Software Engineer Intern at schoolhouse.world, AI Researcher at DuPont Children's Hospital

PROJECTS

Sonata – Symbolic music generation with transformers   Python, PyTorch, W&B
- Trained a transformer to generate classical piano music and deployed to serverless endpoint (demo)
- Implemented RoPE, multi-head relative attention, distributed training, and KV-cache in PyTorch

Self-Driving 2D Racecar   Python, PyTorch, OpenCV, OpenAI Gym
- Trained a convolutional neural network to play a racing game through **reinforcement learning**
- Implemented proximal-policy optimization to achieve human-level performance (demo)

Eddy – Real-time AI mind-mapping tool   Python, FastAPI, React, OpenAI API (GPT, Whisper)
- Created a voice-based application to record and organize your thoughts in real-time
- Implemented automatic grouping and linking related ideas with embedding similarity search

HONORS/AWARDS

Best Natural Language Hack, TreeHacks – 1st prize among 1,600 participants at Stanford's hackathon	2023
Best Audio Hack, NYC Generative AI Hackathon	2023
Neo Scholar – selected to join a program for the top CS students in the country	2022
U.S.A. Computing Olympiad, Gold Division	2019

EDUCATION

University of Delaware | B.S. in Computer Science, Honors (GPA: 4.0)   Sept. 2020 – May 2023
- Distinguished Scholar (top 100 of 30,000 applicants)
- **Relevant Coursework:** Data Structures, Algorithms, Machine Learning, Robotics, Data Mining, Parallel Computing, Linear Algebra, Calculus III. Graduate-Level: Computer Vision, Artificial Intelligence

SKILLS

Languages: Python, Rust, HTML, CSS, JavaScript, TypeScript, SQL, C++, Java
Tools/Libraries: PyTorch, React, Next.js, Git, Docker, Cloud Deployment