

Nalin Nagar

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EDUCATION

B.S. in Computer Science and Minor in Math

University of Illinois Urbana-Champaign

May 2027

GPA: 3.97/4.0

Relevant Coursework: Intro to Computing, Computer Systems and Programming, Discrete Structures, Computational Linear Algebra, Intro to Electronics, Data Structures and Algorithms, Numerical Methods, Number Theory, Analog Signal Processing

EXPERIENCE

Camber (YC W21)

Software Engineer - Internship

June 2025 – Present

New York, NY

- Database efficiency and backend route optimization.

Farragut

Software Engineer - Internship

June 2024 – September 2024

Durham, NC

- Developed production-grade Automated Valuation Models (AVMs) for the N.C. Department of Revenue, enabling data-driven property assessments that impacted \$100M+ in property valuations.
- Leveraged Agentic AI with LangChain and Azure AI Foundry to dynamically query CosmosDB, REST APIs, and 200+ multi-source documents, automating appraisal query analysis and decision-making with 95% accuracy.
- Built and deployed a FastAPI-based inference API on Azure App Service using Docker and implemented inference on a React based frontend, streamlining the valuation process and cutting average appraisal time by 90% (from 2 days to under 5 hours) for 7 counties.

Anomaly Six

Machine Learning Engineer - Internship

June 2023 – September 2023

Alexandria, VA

- Processed 5B+ geolocation data points using Apache Spark and Dask clusters (500+ nodes) to deliver real-time, large-scale data products for federal agencies including FBI and CIA.
- Trained and fine-tuned LLMs with PyTorch, LangChain, and HuggingFace offline/locally and optimized under strict memory constraints using parameter-efficient fine-tuning (PEFT), model distillation, and quantization techniques.
- Designed and developed a secure web application integrating LLMs for English-to-SQL conversion, handling 10K+ queries monthly and generating \$1M+ in new contract revenue within 6 months.

Rhaoes

Software Engineer - Internship

December 2022 – April 2023

Evanston, IL

- Processed 10,000+ temperature data files from wearable devices using Pandas and AWS S3, calibrating and aggregating datasets with 100% accuracy for FDA reporting requirements.
- Designed and deployed an AWS-based ETL data pipeline (Lambda + S3 + DynamoDB) to ingest and process 50GB+ of sensor data weekly, supporting real-time subdermal fluid flow monitoring.

PROJECTS

RapidMatch | C++, TCP, FastAPI

April 2025 – May 2025

- Designed and implemented a high-performance C++ order book matching engine, supporting market, limit (GTC), and fill-or-kill (FOK) orders with price-time priority and efficient real-time trade matching.
- Achieved a throughput of over 400,000 orders per second with an average order processing latency of 2.5 μ s.
- Built a custom TCP client and optimized communication using compact bitfield-encoded messages to minimize payload size and reduce network overhead in real-time order operations.
- Built a FastAPI middleware component allowing communication of a user with the orderbook through HTTP.

TECHNICAL SKILLS

Languages: Python, C++, JavaScript, Java

Frameworks and Libraries: PyTorch, LangChain, HuggingFace, Apache-Spark, Pandas, Scikit-Learn, PostgreSQL, Dask, Node.js, MongoDB, React.js, Express.js, Flask, FastAPI, Git, AWS(Sagemaker, Lambda), Azure(AI Foundry, CosmosDB, App Service), Docker, gRPC