Naman Lalit

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Education

New York University Courant, New York — **September 2023 - May 2025**
Master of Science, Computer Science — *GPA: 3.95 / 4.0*
Teaching and Grading Assistant: Operating Systems, Multicore Processors

National Institute of Technology Hamirpur, India — **July 2017 - June 2021**
Bachelor of Engineering, Computer Science — *GPA: 4.0 / 4.0*

Experience

NYU AI & Predictive Analytics Lab: Machine Learning Researcher, *New York, USA* — **September 2024 - Present**
- Building an ensemble **Retrieval Augmented Generation** framework on **LENR** (Low Nuclear Energy), leveraging over **3000** pre-processed articles and integrating outputs from four **LLMs** (ChatGPT, Gemini, Claude, Llama 3).
- Led NYU's **AI and Predictive Analytics** team on the Politics Project, utilizing **NLP** and **predictive analytics** to forecast the 2024 presidential election, featured on CNN News. [Link]

NYU Secure Systems Lab: Research Assistant, *New York, USA* — **May 2024 - August 2024**
- Developed the core functionalities of an operating system (RustPosix) in **Rust and C++**, maintaining 100% code coverage and improving system reliability and performance.
- Designed **CI/CD** pipelines backed by **GitHub Actions** and **Docker**, reducing deployment time by 80% and increasing efficiency.

Salesforce: Software Engineer, *Bangalore, India* — **February 2022 - August 2023**
- Pioneered the development of the Benefits Management Portal using the Salesforce tech stack, **Java, JavaScript, and React.js**, generating over **$20 million** in ACV.
- Collaborated with cross-functional teams and delivered a feature of automated **PDF** uploads on the **Salesforce** platform using **Java, Spring, and JUnit**, increasing efficiency for over **100** developers.
- Enhanced customer productivity by **90%** by **fine-tuning** and integrating the **Einstein GPT** bot into the public sector cloud service.

InfoEdge: Software Engineer, *New Delhi, India* — **July 2021 - February 2022**
- Led the back-end development of Report's product, used across the organization by more than **80 members**.
- Boosted revenue by **50%** by developing and deploying interactive dashboards and enhanced features using HTML, CSS, Node.js, React.js (**frontend**) and Flask, Python, MySQL (**backend**).
- Automated the processing of over **5000** daily **AWS SQS** events using a Python script, storing data in a **MongoDB** database.

Projects

Ticker Teller: Stock Price Prediction Platform [Link]
- Engineered a platform using **Taipy** and **Python**, integrating an ensemble **machine learning** model, leveraging **LSTM** outputs and **sentiment analysis** of Wall Street Journal articles, to predict stock prices for **20** companies.
- Leveraged **OpenAI ChatGPT-3.5, Lang Chain, and Prompt Engineering** to generate news article sentiments, evidence extraction, and LLM explanations of more than **4000** news articles.

Stock.ai: Retrieval Augmented Generation Application [Link]
- Engineered a **RAG** application tailored for academic research on a dataset of **1,000** stock prediction research articles with technologies including **React.js, LLM, Prompt Engineering, and Docker**.
- Developed an intuitive query-processing system using **Flask** on **Google Kubernetes Engine**; ensured users received prompt access to the most pertinent academic resources while leveraging **ChromaDB** for enhanced content relevance.

Rust and C++: Qualitative Analysis of Multi-Threaded Languages [Link]
- Conducted a thorough qualitative analysis using the **NVIDIA V100 GPU** on **OpenMP** (**C++**) and **Rust** across 4 benchmark programs, evaluating performance based on scalability, programmability, speedup, and efficiency metrics.

Roofline modeling and ImageNet analysis [Link]
- Performed **roofline modeling** of **NVIDIA GPUs (A100 and V100)** using **CUDA** and **PyTorch** on the ImageNet dataset for **ResNet18** and **AlexNet** ML models on NYU HPC servers.

Achievements / Publication

- Awarded **Best Overall Hack**, **Best Healthcare Project**, and two prizes in the **Snap** and **Google** challenge at the Columbia DivHacks '24 hackathon among 300 participants. [Link]
- Published a research paper, **Qualitative Analysis of Text Summarization Techniques,** in Hindawi Journal that performed analysis of 5 text summarization techniques using **Python** and **Machine Learning** with over **4000+ views** and around **2500+ downloads**. [Link]

Skills

Languages: C, C++, Java, Python, JavaScript, Rust
Databases: PostgreSQL, MongoDB, AWS DynamoDB, Google BigQuery
Software: Node.js, React.js, Express, Flask, Taipy, Spring, TensorFlow, PyTorch, LangChain, JUnit, HTML, CSS
Cloud & DevOps: AWS, GCP, CI/CD, Docker, Kubernetes, Git, Linux
Others: Gen AI, LLM (Large Language Models), Redis, Salesforce, SnapAR, Lenstudio
Coursework: Multicore Processors, Cloud Computing, Data Science, Machine Learning, AI, Predictive Analytics, Operating Systems