

Manisha Goyal

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EDUCATION

New York University (NYU)

Masters in Computer Science

New York, NY

Sep 2023 – May 2025 (expected)

- Courant Institute of Mathematical Sciences, GPA: 4.0/4.0

- Coursework:* Fundamental Algorithms, Operating Systems, Data Science, Computer Vision, GPUs, Cloud and Machine Learning

Singapore Management University (SMU)

Bachelor of Science in Information Systems Management

Singapore

Aug 2014 – Apr 2018

- Double Major in Information Systems and Analytics (Advanced Technology)

- Coursework:* Software Engineering, Object Oriented Application Development, Computational Thinking, Data Mining, Text Analytics

SKILLS

Languages and Web Technologies: Java, Scala, Python, C, C++, Cuda, Solidity, SQL, Node.js, JavaScript, HTML, CSS

Frameworks: SpringBoot, Flask, React, TailwindCSS, JUnit, Pytest, Behave

Databases: MySQL, PostgreSQL, Oracle, Pinecone

Machine Learning: PyTorch, Scikit-Learn, NumPy, Pandas, Matplotlib, OpenCV, LangChain, OpenAI GPT, Streamlit

Cloud: OpenShift, Kubernetes, GCP, AWS

Dev Tools and Methodologies: Git, GitHub, Docker, Jenkins, Postman, Jira, Zenhub, Agile/Scrum, DevOps

Others: Linux, REST API, OpenAPI, Swagger, Apache (Kafka, Hadoop, Spark), Tableau, Quorum, Ethereum, Web3.js

EXPERIENCE

J.P. Morgan Chase

Singapore

Software Engineer (Associate), Onyx by J.P. Morgan

May 2020 – June 2023

- Developed decentralized application from the ground up (*Java, SQL, Web3.js, REST APIs, Docker, Kubernetes*) for JPM Coin System, a first-of-its-kind permissioned blockchain network that allows near-instant cross-border liquidity funding for institutional clients
- Led development and live deployment of blockchain ledger (*Smart Contracts, Solidity*) for Partior, an inter-bank blockchain network enabling multi-currency atomic settlements across major global banks in under 2 minutes
- Built proof-of-concept (*Solidity Diamond Standard*) to make Partior's blockchain ledger scalable and upgradable, contributing to successful transaction of tokenized Singapore government securities on the Polygon network

J.P. Morgan Chase

Singapore

Software Engineer (Analyst), Cybersecurity

Aug 2018 – Apr 2020

- Developed Cybersecurity Data Lake (*Apache Hadoop, Apache Kafka, Java, SQL, Linux, Docker*), enhancing the firm's real-time cybersecurity incident monitoring capabilities by 75% and reducing incident response times by 30%
- Led deployment and production management of JPMC Cybersecurity Log Collector (*Java, Linux, Shell Scripting, Jenkins*), enabling real-time processing of syslog messages across 200+ global systems with 99.9% uptime, enhancing security for critical operations

J.P. Morgan Chase

Singapore

Software Engineering Intern, Cybersecurity

May 2017 – July 2017

- Built an automation tool (*Java, SpringBoot, SQL, Jenkins*) to parse and analyze static security scanning results, boosting efficiency in the firm's application security assessments by over 90% and reducing the evaluation times by 80%

Fujitsu-SMU Urban Computing and Engineering Lab

Singapore

Software Engineering Intern

Apr 2016 – Jul 2016

- Researched data-driven optimization techniques for maritime-port-urban logistics, and developed an e-Market Platform application (*Java, SpringBoot, SQL*) that reduced operational costs by 20% and increased logistical efficiency by 40%

PROJECTS

Continuous ASL Signing Interpretation Using LVLM | *Python, PyTorch, OpenCV, LLaVA-NeXT-Video, Streamlit* Oct 2024 - Present

- Developing Large Vision and Language Model (LVLM) for translating continuous ASL signing into English text, fine-tuned on the How2Sign dataset; building real-time application to run the model and generate translations based on webcam input

RAG Chatbot for Research Papers | *Python, Pinecone, LangChain, GPT-3.5-Turbo LLM, Langtrace, Kubernetes* Oct 2024 - Present

- Building a Retrieval-Augmented Generation (RAG) chatbot for querying research papers, enabling efficient retrieval and generation of context-aware insights to enhance accessibility; integrating LLM metrics tracking to optimize performance and cost

House Value Prediction | *Python, Scikit-learn, XGBoost, Pandas, Matplotlib, SHAP analysis* March 2024 - May 2024

- Developed machine learning model using XGBoost and other techniques to predict residential property prices in Ames, Iowa, achieving an R^2 score of 0.918; provided actionable insights for real estate stakeholders to optimize investment strategies

Unix Shell Implementation | *C, Unix, Shell Scripting, Operating Systems*

Jan 2024 - Feb 2024

- Designed and developed simplified Unix shell in C, incorporating functionalities like basic command execution, input/output redirection, pipe-based inter-process communication, and job control for process management