

Eashan Murlidhar Joshi

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TECHNICAL SKILLS

Programming Languages: Python, JavaScript, SQL, Java, C++, C#, Go, R

Frameworks: React, Django, FastAPI, Flask, Node.js, PySpark, .NET, Angular, Spring Boot, Firebase

ML/AI Tools: LLMs (GPT-4, Claude), LangChain, OpenAI API, Prompt Engineering, RAG, CUDA, scikit-learn, TensorFlow

Infrastructure: PostgreSQL, Apache Spark, Neo4j, Microsoft SQL Server, AWS (EC2, S3), Docker, Kubernetes, Terraform, Linux

DevOps & Tools: Git, CI/CD, REST APIs, Jenkins, Agile, JSON, Unit Testing, TCP/IP

Certifications: [AWS Certified Cloud Practitioner](#), AWS Certified Developer - Associate (In Progress)

EXPERIENCE

Graduate Research Assistant

Aug. 2023 – May 2025

Rochester Institute of Technology

Rochester, New York

- Architected backend infrastructure for a retrieval-augmented generation (RAG) system using **Python**, **LLM (GPT-4)**, and vector search, boosting downstream task performance by 3x through context aware prompt injection
- Designed high-throughput GPU data pipelines with **CUDA**, processing 5M+ ChatGPT prompt logs and analyzed 220K+ open-source Maven Central libraries using **Neo4j** to uncover dependency patterns and inform IEEE ICMI research
- Developed a tool to detect multi-test data leakage in ML workflows, integrating **GPT-4** for auto-fixes and testing across 100+ GitHub pipelines

Software Engineer

Sep. 2020 – Sep. 2021

Yardi

Pune, India

- Developed and maintained 80+ backend components in **Python** and **PostgreSQL**, supporting multi-tenant accounting operations across insurance, tax, and escrow workflows in production environments
- Created **RESTful APIs** to integrate backend services with **React**-based frontends, enabling seamless client-side interaction with fiduciary and compliance modules
- Automated custom workflows and designed schema-based validation logic using **Python** and **PostgreSQL**, reducing manual effort by 60+ hours/month and improving data integrity by 15%
- Collaborated with QA to design unit tests and integration test cases, boosting code coverage and reducing defect turnaround by 50% across trust accounting modules
- Adopted **PySpark** for periodic financial data processing and reporting tasks, improving data pipeline performance and batch job reliability by streamlining **ETL** operations
- Logged and resolved 60+ production issues via **CRM** tickets, applying root-cause debugging using PostgreSQL logs and Python profiling tools during sprint cycles

PROJECTS

CodeIntellect - Multi-Agent AI Systems Lab | *Python, FastAPI, React, OpenAI, LLM (GPT-4)* [View Demo](#)

- Built a modular multi-agent system with AI agents (debugger, leakage checker, code critique) orchestrated by a Python ManagerAgent, automating ML code fixes across 120+ debugging tasks
- Developed a FastAPI + React platform with CI/CD (GitHub Actions), reducing manual reviews by 2 hours/session and earning a 4.6/5 user rating

Graph-Based Analysis of the Maven Central Ecosystem (Open-Source) | *Python, Neo4j, CUDA* [View Document](#)

- Processed 130M+ dependency edges from 15M package releases using RAPIDS cuDF for GPU-accelerated preprocessing and Neo4j graph queries to uncover structural and versioning trends, informing ecosystem health metrics
- Analyzed dependency growth and library usage from 2005–2024, generating telemetry-style insights into modular adoption and ecosystem stability that supported long-term maintenance strategies

Trust Accounting Suite Application | *Python, React, PostgreSQL*

- Implemented tax, insurance, and compliance modules in Python, React, and PostgreSQL, and built RESTful APIs with a React front-end to automate transfers, streamlining fiduciary operations and boosting efficiency by 20%

Oil & Gas Compliance Management System | *Python, React, PostgreSQL*

- Automated compliance data workflows using Python and PostgreSQL, and devised dashboards with React to monitor 50+ metrics, streamlining operations and enhancing decision-making

EDUCATION

Rochester Institute of Technology

Rochester, New York

MS in Computer Science and Data Science, GPA: 3.77

May 2025

Pune Institute of Computer Technology

Pune, India

BE in Computer Engineering

May 2020