Nishant Routray

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Skills

Languages & Databases: C/C++, Java, Python, JavaScript, TypeScript, HTML/CSS, SQL/PSQL, MongoDB
Frameworks: React, Redux, LangChain, Kafka, Spring Boot, Node.js, Express, Flask, Streamlit, GraphQL, REST
Tools & Platforms: AWS, Docker, Grafana, Postman, Swagger, Git, Bitbucket, Linux

Education

Master of Science: Computer Science	August 2023 - May 2025
University of Florida, Gainesville	*GPA: 3.8/4*
Bachelor of Technology: Computer Science	July 2016 - July 2020
Veer Surendra Sai University of Technology, India	*GPA: 3.62/4*

Experience

Software Developer Intern (GenAI) — May 2024 - Aug 2024
Motorola Solutions — *Chicago, Illinois*

- Developed **GenAI** chat assistant for Enterprise Core Tech team by utilizing AzureOpenAI's gpt-4o **LLM** to convert natural language queries into SQL
- Employed prompt engineering and few-shot learning with **RAG** using **FAISS** index to achieve an accuracy of **97%** for query translation to handle complex schema and joins
- Executed SQL queries on AWS Redshift and transformed results back to natural response using LLM within **3 sec**
- Succeeded on creating, COCO, a compliance bot to monitor and prevent **privacy breaches** within **Google Chat**

Software Developer (Fullstack) — August 2020 - July 2023
Credit Suisse AG — *Pune, India*

- Engineered vital microservices with **Spring Boot** and **Kafka** for AMER & G20 Regulatory Reporting to DTCC. Seamless transmission of 1M+ trades/day to regulators, rigorous UAT performance tests and PROD deployment
- Crafted **React-Spring Boot** portal empowering users to track over **1M** live trade status and SLA breaches
- Leveraged Ignite caches to turbocharge performance and load time by an impressive **40%**
- Achieved **$100,000** Oracle DB cost reduction by deploying an archival component. Implemented data migration for older data to **SybaseIQ**, ensuring seamless partitioning and remarkable 100% database health
- Led the development of a **Node.js** and **React** based event-driven web app reducing process monitoring time by **30%**. Integrated Oracle and **InfluxDB** for **Grafana** dashboard to monitor the process status of **10+** servers
- Implemented a seamless process scheduling and control system with a robust UI and logging, reducing server dependencies and granting administrators full command of 10+ servers, resulting in a **25%** decrease in downtime.

Summer Research Intern — May 2019 - December 2019
SWAN Lab, Indian Institute of Technology — *Kharagpur, India*

- Enhanced underwater wireless sensor network routing through innovative layer-wise hop transfer, yielding significant performance improvements of **50%** across various metrics compared to existing research papers
- Demonstrated maximum packet delivery, minimal latency, and improved energy efficiency using Game Theory, supported by NS3 and **C++** simulations, achieving remarkable advancements in performance

Projects

JARGO: Tech Jargon Translator ↗

- Developed a RESTful **GenAI** app to simplify technical terms, saving **100 man-hrs/wk** for IT tickets resolver

Intelligent Data Processing and Redaction Pipeline for Public Safety Analysis ↗

- Download and parse more than **1000** daily incidents related PDFs, extracting critical fields and storing in SQLite
- Sensitive data censorship using **spacy** for Named Entity Recognition (NER) by redacting **90%** of sensitive details
- Data Augmentation by leveraging **OpenMeteo's Historical Weather** and **Google Maps** API for data enrichment

Human-Elephant Conflict ↗

- Implemented camera-based elephant detection system triggering bee sounds reducing intrusion by **70%**
- Achieved rapid response times by notifying the forest department via **Twilio** with live images and location details in under 1 minute, facilitating prompt intervention and wildlife protection

Achievements and Certification

- University of Florida's Academic Achievement Award for outstanding undergraduate performance
- Branding Head of Global Coding Challenge 2022, Credit Suisse
- Oracle Certified Java EE6 Web Developer