KANAD NALESHWARKAR

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EDUCATION

Virginia Tech, Blacksburg, VA **Jan 2023 – Dec 2024**
Master of Engineering, Computer Science and Applications GPA: 3.8/4.0

Savitribai Phule Pune University, Pune, India **Aug 2016 – May 2020**
Bachelor of Engineering, Computer Engineering GPA: 7.5/10.0

EXPERIENCE

Virginia Tech, Dept. of Chemistry, Blacksburg, VA **Nov 2024 – Dec 2024**
Python Developer

- Refactored **Python** scripts for analyzing nuclear magnetic resonance (NMR) data, expanding their usability and reducing 80% manual workload.
- Developed a **Unix Shell script** to automate the submission of Gaussian input files to a high-performance computing server, speeding up the analysis process.

Hansen Technologies, Pune, India **May 2023 – Aug 2023**
Software Developer (Contract)

- Engineered a robust bulk order processing tool using **OpenSearch** and Linux Shell scripting, achieving a 300% increase in the reprocessing speed of failed telecom orders, improving resolution time for over 1,000 daily orders.
- Improved issue resolution time by 40% by collaborating with a team of business analysts to establish Standard Operating Procedures (SOPs) for debugging production code, ensuring consistent and streamlined operations.
- Shortened new hire training period by 50% by creating comprehensive, user-friendly product documentation on Confluence, enabling faster onboarding.

Hansen Technologies, Pune, India **Nov 2020 – Dec 2022**
Software Developer

- Led the first **cloud-native** deployment of Hansen's telecom service provisioning product, tailored for the biggest telecom service provider in the UK, serving over 6 million customers.
- Streamlined broadband installation and update for customers by engineering high-performance order processing pipelines capable of handling 500 orders per second.
- Built scalable microservices using **Spring Boot** and **REST APIs**, written in **Java**, enabling communication between front-end, backend systems, and third-party services, with a 99.9% reliability rate.
- Optimized event handling for peak loads of 10,000 events per second by architecting event-driven applications with **Apache Kafka**, designing robust topics, partitions, and consumer groups for scalable and asynchronous communication.
- Configured robust **CI/CD** pipelines with **Docker, Kubernetes** and **Jenkins**, automating the deployment process on Amazon Web Services and reducing the deployment time by 75%
- Achieved 99.95% product uptime by managing cloud infrastructure on **Amazon EC2, EKS**, and **S3**, ensuring consistent performance under high demand.
- Improved interactive **React** components to visualize order processing flows, enhancing understanding of complex workflows through dynamic, real-time updates.
- Optimized **Oracle** database **SQL** queries, improving response times by 40% and ensuring reliable management of customer data.

OPEN-SOURCE CONTRIBUTION

Memray: Bloomberg's Memory Profiler for Python **Oct 2024**
Devised a solution to inject JavaScript content into Jinja-based HTML templates in the reporting tool, enabling 100% offline functionality for air-gapped systems. This enhancement allowed Memray users to utilize bundled JavaScript libraries without relying on CDN links, improving accessibility and security compliance for environments with restricted internet access.
GitHub Repo

PROJECTS

Electronic Theses and Dissertations Classifier **Aug 2023 – Jan 2024**
Trained and deployed a document classifier, based on the BERT language model, for an information retrieval system managing 500,000+ scientific documents. Used Streamlit for frontend and PostgreSQL to store data. Deployed the application on a high-performance computing server with 160GB of GPU memory, reducing inference time by 70%, enabling near real-time document classification.

Ducky: A ChatGPT Backed Coding Assistant **Aug 2023 – Dec 2023**
Developed a coding assistant leveraging the ChatGPT API and prompt-tuning, enabling developers to write, debug, and modify code with a 40% faster turnaround. Built a responsive Streamlit-based frontend and implemented a conversation history management system.

RepoRanger: An integration between GitHub and Discord **Jan 2023 – May 2023**
Integrated GitHub and Discord APIs using JavaScript to streamline DevOps for teams with 20+ contributors. Automated CI/CD pipeline updates and issue tracking, reducing manual effort by 50%, enabling faster development cycles.

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, HTML, CSS, SQL

Frameworks: Flask, Spring Boot, React, Node.js, NoSQL, PyTorch, TensorFlow, scikit-learn, Hugging Face, Jupyter, OpenCV

Tools/Platforms: AWS (EC2, S3, ECR, SageMaker), OpenSearch, Elasticsearch, Kafka, Git, Maven, Docker, Kubernetes, Helm, Jenkins, Kibana, Terraform, PostgreSQL, MySQL, DynamoDB, Postman, JIRA, ChatGPT API