SWANAND SANJAY KHONDE

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EDUCATION

Rice University   08/23 – 12/24
Master of Computer Science   *Houston, USA*

Vishwakarma Institute of Technology   08/17 – 06/21
B.Tech Computer Engineering   *Pune, India*

EXPERIENCE

Nedd Technologies   05/24 – 08/24
Software Development Engineer - Python, Flask, Azure, PostgreSQL, NextJS, Grafana, Mapbox   *Houston, USA*
- Directed the end-to-end development of the ESG Platform, taking the project from conception to a fully functional demo within **2 months**.
- Engineered a Flask-based backend service capable of handling over **1,000 API requests per second**, and designed a responsive Next.js User Interface.
- Configured a suite of essential tools, including Grafana, Mapbox, and Azure AI services, on an **Azure Linux VM**.
- Engineered and implemented a data model, creating **60 PostgreSQL database** tables covering Environment, Social, Governance, Ops, Regulatory, and Finance domains.
- Employed Azure DevOps to implement CI/CD pipelines and deployment strategies, reducing deployment time by **50%** and increasing product reliability with a **60%** decrease in production issues.

HSBC Technology India   08/21 – 06/23
Software Engineer - Python, Java, Spring Boot, React, Kubernetes, Ansible, Grafana, Unix   *Pune, India*
- Spearheaded development of Load Trade Archive Service, a microservice-based platform for **Bloomberg's Load Trade** production instance.
- Enabled direct user access to XML and CSV trade files through a UI with different filters, reducing weekly IT team search time by **30 minutes** per member and significantly improving data accessibility and organization.
- Deployed **Log Dream**, a logging solution with a user interface that simplified error tracking for production issues across 4 different services, reducing log review time by **60%**.
- Authored a Python-based CR Checker Plugin for **Ansible Tower**, automating pre-deployment verification of **100%** Change Requests per month, enhancing compliance and reducing deployment errors by **85%**.
- Developed a **Spring Boot** service with API endpoint for **Kubernetes** deployments via Jenkins, integrating with ServiceNow for automated CR verification, ensuring **100% compliance** before production deployments.

Optimum Data Analytics   08/19 – 01/20
Machine Learning Engineer Intern - Python, Flask, Docker, Tensorflow, MySQL, MLOps   *Pune, India*
- Conceptualized and led "Document Classification using Visual Parameters", a deep learning project, achieving a robust classification model with **95.7%** training accuracy and **83%** test accuracy using a CNN framework.
- Implemented an MLOps pipeline using Docker, TFX, and Jenkins for automated model tracking, version control, and deployment, reducing model update time by **30%** and ensuring continuous integration and delivery.

ACADEMIC PROJECTS

Empirical Analysis of Fine-tuning Image Captioning Model on Synthetic Data   01/24 – 05/24
Hugging Face, Python, Pytorch, Parquet, BLIP   *Rice University*
- Conducted an in-depth study on the effects of training text-to-image generative models with synthetic data, revealing progressive degradation in model performance, achieving ROUGE-1 score of **0.2958** and BLEU score of **0.0161**.
- Highlighted risks of synthetic data in generative AI, such as reduced caption diversity, with ROUGE-L **(0.2708)** and BERT Score F1 **(0.8890)** evaluations, based on the study 'Self-Consuming Generative Models Go MAD'.

TECHNICAL SKILLS

Languages :   Python, Java, Javascript, Typescript, SQL, C++.
Frameworks :   Spring Boot, Node.js, Express.js, Nextjs, React, Flask, PyTorch, Tensorflow.
Others :   PostgreSQL, MongoDB, Azure, Ansible, Grafana, DevOps, Linux, Pandas, Numpy, Docker, Kubernetes, Agile, Redis, Kafka, Tailwind CSS.