Avdhoot Patil

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EDUCATION

Stony Brook University   Stony Brook, NY
Master of Science in Data Science   *Aug 2023 – May 2025*
Relevant Coursework: Data analysis, Probability, Data Science fundamentals, Data management, Statistical Computing, Big data systems, Big data analysis, Deep Learning, Machine Learning, Smart energy in the Information Age.

Xavier Institute of Engineering, University of Mumbai   Mumbai, India
Bachelor of Engineering in Information Technology   *Jul 2018 – Jun 2021*

SKILLS

Languages and Frameworks: Python, Javascript, SQL, GoLang, Terraform, React, Django
Tools and Platforms: GCP, AWS, Azure, Sagemaker, Kubernetes, Docker, Tensorflow, sci-kit learn, Deep learning, NLP, Langchain, PySpark, Elastic Search, Kibana, Power BI, Prometheus, Grafana, REST, Redis, Pub-Sub, Nginx, MongoDB
Certification: Google Cloud Platform Certified Associate Cloud Engineer [Credential link (GCP ACE)]

EXPERIENCE

Research Assistant | *Research Foundation at SUNY, Stony Brook, NY*   Jun 2024 - present
Project: Stony Brook Medicine - Long COVID
- Analyzed over 6 million COVID patient records for the Long COVID project at Stony Brook Medicine using N3C data. Leveraged PySpark to develop data pipelines and perform statistical analyses, improving data processing efficiency by 40% and contributing to two research queries.

Software Engineer (Cloud, DevOps and MLOps) | *NeoSoft Technologies, Mumbai, India*   Jun 2021 - Jun 2023
Project 1: Internal Talent Acquisition Analytics platform
- Architected and developed a scalable Talent Acquisition Analytics Platform using **Docker** and **Kubernetes**. This reduced the time-to-fill for open positions by 25%, significantly enhancing recruitment efficiency and agility.
- Leveraged **microservices for analytics** using **Python** and **Elasticsearch**, **improving candidate quality by 20%**, **boosting retention rates**.

Project 2: LabCorp Annotation Product
- Engineered a **model training and deployment framework in Python**, enabling seamless model training, deployment, and live servicing on **AWS Lambda and API Gateway**, contributing to **30% faster model deployment**
- Led a codebase refactoring, yielding a 20% speed boost and 30% complexity reduction. Introduced configuration files, resulting in 25% fewer bugs and streamlined development.

Software Engineering intern | *Tech Mahindra, Mumbai, India*   Jan 2021 - Apr 2021
- Played a key role in software development project, encompassing the design and implementation of backend system utilizing Java, SQL, PL/SQL, Hibernate, MVC, Spring Boot, and Microservices. Additionally, spearheaded the creation of a comprehensive database for a banking application through meticulous PL/SQL scripting.

MENTORSHIP

- **Led training programs** for new team members at Neosoft, providing in-depth **guidance on GCP, DevOps practices, Git**, and various workflows. This streamlined training approach contributed to a 30% reduction in onboarding time, fostering a more agile and efficient team.

ACADEMIC AND PERSONAL PROJECTS

Social Bargains - Ecommerce Platform for University Students (In Progress)
- Developing a platform using Python for the backend and React Native for the frontend, where students can sell items directly to fellow students without a traditional cart and checkout system.
- Integrating a **2-way handshake protocol** in the backend to securely complete and reflect orders on the platform, with the goal of creating a streamlined and transparent **order fulfillment** process that enhances user trust and satisfaction.
- Designing and implementing a **fraud detection system** using **machine learning** to identify and prevent fraudulent transactions and listings, aiming to maintain a safe and secure marketplace for users.

Malware Detection of Portable Executable files
- Researched, curated, and evaluated datasets for malware detection, selecting the most relevant sources.
- Restructured and **fine-tuned a high-performing CNN model** using **Tensorflow and Keras**, achieving an impressive **95% accuracy** in **multi-class malware detection**. Mitigated class imbalances through strategic class weighting, yielding a 20% improvement in multi-class detection of the malwares and with 30% higher accuracy.