Manas Bedekar

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Professional Summary

Experienced DevOps Engineer with expertise in designing and deploying scalable cloud infrastructure and CI/CD pipelines using AWS, Azure, and GCP. Proficient in Kubernetes, Docker, and Infrastructure as Code (IaC), with a strong focus on security and system reliability

Education

McGill University **Sep 2023 – May 2025**
Master of Science in Electrical & Computer Engineering *Montreal, QC*
Relevant Courses: ML, NLP, Deep Learning, Ethics in Intelligent System, Software Language Eng. *3.86/4*

Savitribai Phule Pune University **Aug 2017 – Jul 2021**
Bachelors of Engineering in Electronics and Telecommunication *Pune, India*

Technical Skills

Programming Languages: C, C++, Python, HTML, CSS, Java, Groovy, Bash
Data Science & Machine Learning: Kafka, Spark, Big data, NLP, Image Processing, Statistics, Pandas, Numpy, Scipy, Sci-kit learn, Tensorflow, Keras
DevOps Practices: GitHub Actions, GitLab, Azure DevOps, Jenkins, Docker, Kubernetes, Git, Ansible, CI/CD
Frameworks & Technologies: Spring Boot, Django, Flask, JBoss EAP

Experience

McGill University | *Java, DSL, Modeling, DevOps, Xtext, Python, Microservice* **Sep 2023 – Present**
Researcher *Montreal, QC*

- Designed and developed a multi-platform editor and domain-specific language (DSL) for analyzing DevOps pipeline specifications, supporting platforms like GitHub Actions, GitLab, and Azure DevOps
- Engineered automated processes for extracting, preprocessing, and validating heterogeneous datasets comprising over 42,000 pipeline specifications from open-source repositories
- Implemented features for syntax highlighting, dialect detection, and cross-platform compatibility, enhancing usability for researchers and developers
- Presented work at the ACM/IEEE 27th International Conference on Model Driven Engineering Languages & System

Amdocs Development Centre India LLP | *CI/CD, DevOps, Terraform, Jenkins, WebLogic* **Aug 2021 – Jul 2023**
Software Engineering Associate *Pune, India*

- Designed and developed installation scripts for 3 business system support (BSS) applications in bash and JBoss framework which ensured absolute zero human intervention in the production deployment
- Designed advanced CI/CD pipelines in Jenkins for production deployment which reduced 80% deployment time
- Developed automation in Ansible and Shell, reducing redundant tasks by 60%, resulting in 22 hours saved weekly
- Handled production and non-production deployments for OSS and BSS applications improving system stability by 75%

Academic Projects

Stock Prediction using Fundamental Financial Data | *Python, MongoDB, Deep Learning* **Jan 2024 – Dec 2024**

- Designed and implemented deep learning models, including CNNs and Bidirectional LSTMs, to predict quarterly stock prices using fundamental financial data with 16.8% MAPE and 19.54 RMSE
- Processed and analyzed large-scale financial datasets, optimizing feature engineering for model accuracy
- Developed a scalable solution for efficient real-time predictions, ensuring adaptability across different market sectors
- Achieved 2nd Runner-Up in the McGill-FIAM Asset Management Hackathon, outperforming 66 teams across Canada

Ethical Fine-Tuning and Evaluation of Generative AI Models | *Python, Gen-AI* **Aug 2024 – Dec 2024**

- Developed fine-tuned generative AI models with public domain data to achieve ethical, domain-specific performance
- Improved image fidelity by 73% using LoRA and evaluated quality with FID, CLIP, and ALIGN metrics

Context-based Email Ranking System for Enterprise | *Python, Django, HTML/CSS, NLP* **Jun 2020 – Jun 2021**

- Designed and developed an email ranking system by focusing on email content and communication frequency
- Implemented a topic modeling algorithm to recommend top 'N' emails achieving an accuracy rate of 90% in identifying relevant emails, resulting in time savings of 30% for employees in sorting through their inbox

Additional Experience

McGill University | *Teaching, GitHub, Java, ML, Requirements Engineering* **Sep 2023 – Present**
Graduate Teaching Assistant *Montreal, QC*

- **Model-Based Programming (ECSE 223):** Fall 2023, Winter 2024, Fall 2024 (Tutorial instructor, Grader)
- **Networking Fundamentals (CCCS 431):** Fall 2024 (Back-office work, Grader)