Takshshila Rawat

takshilarawat@gmail.com | linkedin.com/in/takshshila/ | github.com/takshshila | takshshila.github.io | Tempe, AZ

As the first female graduate from my village, I didn't touch a computer until I was 18, a freshman in college. Now, with over six years of experience as a Software Engineer, Machine Learning Engineer, and manager, I'm working on Big Data. I'm eager to return to Software Engineering, Machine Learning, and Data Science roles.

EXPERIENCE

Barclays
Whippany, NJ

Big Data Engineer: [Hadoop, Python, DataOps, GenAI, Hive, SQL, Elasticsearch, Linux, GitLab]   Feb 2024 – Present
- Developed a fully functional financial chatbot using RAG, AWS, and GenAI, enriching user input with a knowledge base stored in a vector database to provide enhanced, informative responses
- Developed and managed automated Python scripts to analyze Hadoop clusters, identifying duplicate, unused, and unowned databases. Achieved a 10% reduction in memory usage within three months by extracting and analyzing edit logs and fsimages.
- Built an observability dashboard for Barclays Command Center to enable real-time monitoring of Enterprise Data Platform

JPMorgan Chase
(Contract), Dallas, Tx

Data Governance Analyst: [SQL, Python, AWS, PySpark, Tableau, Jira, Data Modeling]   Nov 2023 – Feb 2024
- Enforced data compliance measures and prepared datasets for machine learning models, ensuring a seamless integration of governance principles with a focus on optimizing data quality and usability
- Automation of the Data Book Registration (DBR) creation and analysis system through Python and Pandas, streamlining the process for efficient data management and insights generation

Teuvonet Technologies
Tempe, AZ

Machine Learning Engineer: [Python, C++, Pycuda, Pandas, Numpy, CNN, MQTT, ETL, Flask]   June 2022 – May 2023
- Delivered a sustainable alternative to traditional Machine Learning strategies to solve function approximation, classification, and clustering tasks using self-organizing maps (Kohonen-nets).
- Implemented cuda-kernels for feature ranking and model training which reduced execution time by 140%.
- Built an explainable AI application that detects real-time objects in drone images and trained CNN and ResNet models

Reliance Jio
Mumbai, India

Manager: [ML, Java, Python, Javascript, Python, Jenkins, Docker, Neo4j, JSON]   April 2020 - August 2021
- Led a team of 8 to develop Machine Learning as a Service consisting of an Anomaly Detection and Forecasting Engine, provided first real-time training, predicting user performances, analysis and analysis for telecom data
- Designed microservice architecture with load balancers between each microservice, User Interface, and REST & WebSockets API
- Implemented and maintained CI/CD pipeline using Git, Jenkins, Workflows, Docker, etc

Software Engineer: [Java, Javascript, Elasticsearch, AngularJS, Rest APIs, Apache POI, Jline, SQL]   June 2016 - March 2020
- Introduced microservice architecture to analyze and monitor real-time call data records, implemented a Data Analysis microservice that handled query requests from the UI, executed queries on Elasticsearch, and analyzed data from 93 million users
- Built an interactive and responsive UI serving multiple microservices with multiple reusable patterns using MVC patterns
- Developed a microservice that effectively monitors and auto-scales resources such as CPU, RAM, Docker containers, and VNF in the Jio cloud, reducing 45% of man-hours through real-time computational resource allocation.
- Implemented a centralized dynamic Command Line Interface for monitoring 30 microservices in the Jio cloud, providing real-time commands, unique sessions, and secure user/role management, which is currently serving 95% of Jio enterprise services

EDUCATION

Arizona State University (Tempe, AZ)
Master of Science in Computer Science - GPA: 4.0   Aug. 2021 – May 2023

National Institute of Technology (Hamirpur, India)
Bachelor of Technology in Computer Science   Aug. 2012 – May 2016

SKILLS

Languages: Python, Java, Hadoop, SQL, Cuda-Programming, Spark, JavaScript, Elasticsearch, HTML/CSS, Neo4j, D3.js
Tools: AWS, Git, Jenkins, Docker, Flask, Jira, Confluence, MQTT, Boto3, Linux, Jupyter Labs, VSCode, Eclipse
Miscellaneous: PyTorch, Scikit-Learn, TensorFlow, Keras, Pandas, Tableau, Pycuda, AI/ML, Reinforcement Learning, NLP

PROJECTS

Dialog system: Hierarchal Help Me Think - [LLMs, GenAI, NLP, PyTorch, Python, HuggingFace, Pandas]
- Implemented hierarchical prompting engineering to customize Help Me Thinks prompt outputs of different Large Language Models
- Created custom prompt datasets from GPT-3 and fine-tuned the LLMs (Bloom, Flan-T5, XLNET, GPT2, etc.) to generate customized output to help non-expert users to solve any task

ACCOMPLISHMENTS

- Received the 'On the Spot Award' from Barclays' COO for courage, resilience, and a positive impact during the GenAI Hackathon
- Received the Gargi Award from the Indian State Government for academic achievement and inspiring other female students