SHREYA THAKUR

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SKILLS

Programming Languages & Frameworks: Python, Java, C/C++, HTML, Flask, REST API, FastAPI, PySpark
Libraries & Data Processing: NumPy, Pandas, Seaborn, Matplotlib, Hadoop, MapReduce, Dialogflow, SpeechRecognition
Deep Learning and Natural Language: NLP, Hugging face, BERT, NLTK, LLM, NER, Sentiment Analysis, PyTorch, TensorFlow
Databases: SQL, PL/SQL, PostgreSQL, Blob Storage, Graph Databases
Cloud Computing: AWS (EC2, S3, Lambda, CloudWatch, CodePipeline, Step Functions, SageMaker), Azure, Azure Functions
DevOps & Tools: Docker, Git, GitHub, CI/CD Pipelines, Azure DevOps, Jupyter, VS Code, Postman
Soft Skills: Project Management, Agile Methodologies, Cross-functional Collaboration

Certifications: AI-900 (Microsoft), DBMS (NPTEL), Python (MTA)

WORK EXPERIENCE

Graduate Teaching Assistant   *Sep 2024 – Present*
University at Buffalo, Buffalo, NY

- Mentored 200+ students in Deep Learning, covering topics such as CNNs, Transformers, and parallel model training.
- Reviewed and graded model performance using metrics like loss curves, inference latency, and throughput benchmarks.

Project Engineer / Cloud ML Engineer   *Aug 2019 - Aug 2022*
Wipro Ltd.
Project: British Petroleum (BP)

- Designed an AI-powered document retrieval engine using Azure AI Search, improving latency by 40% across 10M+ documents.
- Deployed multimodal models (text + metadata) using Azure Cognitive Services and ML pipelines, boosting accuracy by 20%.
- Orchestrated pre-processing and transformation pipelines using Python and Azure Functions, automating data handling by 60%.
- Fine-tuned retrieval models with feedback loops, enhancing relevance scores by 25% using NLP and ranking optimization.
- Optimized deployment via Azure DevOps and Docker, reducing latency and cutting deployment time by 35%.

Project: Cisco Partner Portal

- Developed RESTful APIs (Java, SQL) and responsive UIs (HTML, CSS, JavaScript) for onboarding and deals, reducing manual effort by 50%, cutting load time by 40%, and boosting engagement by 25%.
- Containerized services using Docker and integrated CI/CD with Jenkins, improving reliability and deployment speed by 40%.
- Automated testing with Java, Selenium, and Cucumber, reducing manual QA efforts by 60%.

PROJECTS

Smart Infra Monitor – Real-Time Infra Monitoring & Anomaly Detection   *Jun 2025 – Present*
[https://github.com/shreya7code/Anomaly_Detection-Smart_Infra_Monitor]

- Designing a FastAPI backend to stream IoT data via Kafka into InfluxDB for infrastructure diagnostics and real-time alerting.
- Containerizing the pipeline with Docker and deploying on AWS, with planned ML integration for anomaly detection and dashboards.

VisionSpeak: AI-Powered Multi-Language OCR with Summarization and Speech   *Mar 2025 – May 2025*
[https://github.com/shreya7code/VisionSpeak_CVIP]

- Built a web app for multi-language OCR, summarization, and speech output using deep learning models (ResNet-100, CRNN, BiLSTM, CTC) for accurate text extraction.
- Integrated language detection (FastText), translation (NLLB), summarization (T5), and TTS for speech-driven experiences.

Gesture to Text: Sign Language Interpretation   *Jun 2024*
[https://github.com/shreya7code/Sign-Language-Interpretation-Deep-Learning-Model]

- Developed a CNN-ResNet-DenseNet ensemble to classify ASL gestures from webcam input, achieving 93% real-time accuracy.
- Deployed a responsive Streamlit app to convert visual gestures into textual responses, mimicking multimodal conversational turns.

CardioVigilant – Cardiovascular Disease Prediction   *Apr 2024*
[https://github.com/shreya7code/CardioVigilant-ML]

- Implemented machine learning models (ANN, Random Forest, Logistic Regression, KNN), to predict heart disease, achieved 92% accuracy using KNN after conducting thorough data preprocessing and tuning.
- Built a Flask web application to provide user-friendly cardiovascular risk predictions.

EDUCATION

University at Buffalo, The State University of New York   *Buffalo, NY*
Master of Science: Computer Science and Engineering   *Jan 2024 – May 2025*
GPA: 3.48/4.00

West Bengal University of Technology   *Kolkata, WB, India*
Bachelor of Technology: Information Technology   *Aug 2015 – Jul 2019*
CGPA: 8.47/10.00