

Swarnim Tripathi

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Lucknow, Uttar Pradesh, India

EDUCATION

Vellore Institute of Technology <i>Bachelor of Technology in Computer Science and Engineering</i>	Chennai, India <i>July 2024 – May 2028</i>
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TECHNICAL SKILLS

Programming Languages: Python, C++, JavaScript, SQL, Kotlin, Rust, HTML, CSS
Machine Learning and AI: PyTorch, TensorFlow, scikit-learn, Transformers, Fine-tuning, LoRA, Neural Networks, NLP
Frameworks and Libraries: FastAPI, Flask, Django, React, Pandas, NumPy, Matplotlib, XGBoost
Databases and Storage: PostgreSQL, MongoDB, SQL, NoSQL
DevOps and Cloud: Docker, Docker Compose, Git, Linux, CI/CD, Version Control, Airflow
Data Science: Feature Engineering, Model Deployment, Data Preprocessing, Statistical Analysis, Reinforcement Learning

PROJECTS

Promptimus Neural Shell Assistant <i>Python, PyTorch, TinyLlama, LoRA, Docker</i>	Jan 2025
<ul style="list-style-type: none">Fine-tuned TinyLlama model achieving 89% command accuracy, improving base model performance by 24% using LoRA on 150+ Stack Exchange datasetsImplemented safety validation system with 95% compliance rate, preventing dangerous command execution through automated dry-run analysisBuilt production-ready containerized application reducing manual data curation by 60% through automated API pipeline integration	
LearnBuddy Adaptive Learning Platform <i>Python, FastAPI, PostgreSQL, Docker, ML</i>	Dec 2024
<ul style="list-style-type: none">Developed reinforcement learning engine improving learner retention by 15% through dynamic difficulty adjustment algorithmsIntegrated Sentence-Transformers achieving 90% grading accuracy, outperforming traditional keyword-based methods by 25%Deployed scalable full-stack application using Docker Compose enabling one-command deployment across multiple environments	
Anxiety Level Predictor <i>Python, scikit-learn, SGDRegressor, Data Analysis</i>	Oct 2024
<ul style="list-style-type: none">Processed lifestyle datasets using advanced encoding techniques and trained SGDRegressor model predicting anxiety levels on 1-10 scaleImplemented robust preprocessing pipeline with missing value imputation achieving competitive MAE through optimization	

CERTIFICATIONS

Machine Learning Specialization <i>DeepLearning.AI and Stanford University</i>	June 2025 <i>Coursera</i>
Unsupervised Learning, Recommenders and Reinforcement Learning <i>Stanford University</i>	June 2025 <i>Coursera</i>
Advanced Learning Algorithms <i>DeepLearning.AI</i>	May 2025 <i>Coursera</i>
Supervised Machine Learning: Regression and Classification <i>Stanford University</i>	May 2025 <i>Coursera</i>
Data Analysis with Python <i>freeCodeCamp</i>	May 2025 <i>Online Certificate</i>