DEEPANKAR GUPTA

deepankargupta874@gmail.com · linkedin.com/in/DeepankarGupta · github.com/deepankargupta856 ·

EDUCATION

The National Institute of Engineering, Mysuru   *2023 – Present*
B.E. in Computer Science & Artificial Intelligence, **CGPA: 9.13**

RELEVANT COURSEWORK

- Data Structures
- Database Management
- Operating Systems
- Software Engineering
- Machine Learning
- Deep Learning
- Computer Vision
- Large Language Models

EXPERIENCE

Research Intern – NIE-FH Dortmund International Collaboration   *June 2025 – Present*
- Developed and fine-tuned the YOLOv8s object detection model on a custom parking lot dataset, achieving near-perfect detection accuracy under varying daylight and environmental conditions.
- Optimized model inference using ONNX-based CPU acceleration for faster deployment.
- Currently deploying the solution in real-world environment at the NIE North Campus, integrating live CCTV feeds for automated detection.

PROJECTS

- **Large Language Model from Scratch**   *PyTorch, Python*
  - Built a GPT-2.0 transformer model from the ground up, implementing core components including the tokenizer, transformer layers, attention mechanisms, GELU, and top-k sampling for text generation.
  - Trained a 124-million parameter model on a cleaned Alpaca-formatted dataset, managing the end-to-end training and inference pipeline.
- **Hybrid Spotify Recommender System**   *Python, Docker, AWS, CI/CD*
  - Created a hybrid recommendation engine combining collaborative and content-based filtering techniques to suggest music tracks.
  - Containerized the system using Docker and deployed it on AWS EC2, implementing a blue-green CI/CD pipeline for robust and seamless updates.

TECHNICAL SKILLS

Languages	Python, C++, SQL
Frameworks & Libraries	Flask, Streamlit, PyTorch, LangChain, Selenium, BeautifulSoup
MLOps & Deployment	Git, Docker, Jenkins, MLflow, DVC, AWS (EC2, ECR, RDS, CodeDeploy)
Databases	MySQL, SQLite
Development Tools	PyCharm, Jupyter Notebook, VS Code

ACHIEVEMENTS

- Secured **AIR 73** in the National Entrepreneurship Olympiad (IIT Bombay) out of 100k+ participants.
- Achieved NISM RA XV Certification from the NISM with a score of 70.5%.
- Solved **500+ DSA problems** on LeetCode and GeeksforGeeks, building strong algorithmic foundations.
- Placed in the **top 3%** among over 1.2 million candidates in the JEE Mains engineering examination.

EXTRACURRICULAR

- As **Editorial Lead** at the Anveshan Research Club (NIE Mysuru), created an automatic blog generation system using n8n to streamline and scale content publishing.