

# Manohar Gehlot

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## EDUCATION

B.Tech in Artificial Intelligence & Data Science, Uka Tarsadia University

CGPA: 8.48 (2022–Present)

## PROJECTS

### GPTini — PyTorch, Transformers, NLP [GitHub](#)

- Built a character-level Transformer model implementing multi-head self-attention and dynamic training for efficient text generation on mid-range GPUs.
- Designed a modular codebase allowing rapid experimentation with different model sizes and hyperparameters.

### DCGAN for Face Generation — PyTorch, GANs [GitHub](#)

- Engineered a Deep Convolutional GAN (DCGAN) in PyTorch and trained it on 200K+ CelebA images to synthesize high-fidelity human face images.
- Incorporated stabilization techniques (batch normalization, label smoothing, gradient clipping) to mitigate mode collapse and ensure stable adversarial learning between the generator and discriminator.

### Madrin Neural Network Library — Python, NumPy [GitHub](#) | [PyPI](#)

- Developed a modular neural network library from scratch in Python/NumPy, enabling end-to-end model training with custom forward and backward propagation.
- Implemented core components including a class-based layer system, stochastic gradient descent (SGD) optimizer, model checkpointing, and training-loss monitoring to facilitate flexible experimentation without high-level frameworks.

### Neural For All Dashboard — MERN Stack, TensorFlow.js [GitHub](#)

- Developed a dashboard enabling browser-based neural network creation, training, and visualization with TensorFlow.js.
- Integrated real-time visualization of model performance metrics during training sessions.

### Snake Game AI — Pytorch, Pygame, Reinforcement Learning [GitHub](#)

- Designed a Snake game AI using Double Deep Q-Networks (DDQN) to train an agent for autonomous gameplay.
- Optimized training with reward shaping and epsilon decay strategies to enhance agent performance.

### Decentralized Compute Marketplace — Solidity, Smart Contract, Web3.js, React.js, Docker [GitHub](#)

- Developed a decentralized compute marketplace dApp, leveraging smart contracts for secure, fixed-price job execution and first-come-first-served resource claiming without intermediaries.

## SKILLS

**Programming:** C, C++, Java, Python

**Frameworks:** PyTorch, TensorFlow, Keras

**Libraries:** NumPy, Pandas, Matplotlib, Scikit-learn

**Web & Database:** HTML, CSS, JavaScript, React, Node.js, Express, Django, MongoDB, MySQL

**Blockchain & Web3:** Ethereum, Hyperledger Fabric, Solidity, IPFS, Web3.js, Ethers.js, Hardhat

**Tools:** Git, GitHub, Postman

## Workshops and Training Programs

- Gemini as a Judge for RAG Evaluation (AI Surat), April 2025
- End-to-End Machine Learning (UTU), Sep 2024
- Recent Advancements in AI & Robotics (SVNIT), Jul 2024

## ACHIEVEMENTS

- Secured **All India Rank 663 in GATE** (Data Science & AI) 2025.
- Top 7** finalist at Odoo x Amalthea Hackathon 2024, IIT Gandhinagar.
- Built a peer-to-peer compute marketplace at **Higgs-a-thon 2025, a 56-hour hackathon**.