# **Manohar Gehlot**

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#### **EDUCATION**

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

#### **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.

CGPA: 8.48 (2022-Present)

 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** — Python, Pygame, Reinforcement Learning <u>GitHub</u>

- 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, fixedprice 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

#### **CERTIFICATIONS**

- End-to-End Machine Learning (UTU), Sep 2024
- Recent Advancements in AI & Robotics (SVNIT), Jul 2024
- Drone Technology and Applications (SVNIT), Jun 2024

#### **ACHIEVEMENTS**

- Secured All India Rank 663 in GATE (Data Science & Al) 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.