# TOHEED AKHTAR

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## Education

**Techno India NJR Institute of Technology, Udaipur (RTU)**  **2022 - 2026**
*B.Tech in Computer Science & Engineering*  *8.0/10 CGPA*

## Work Experience

**Chirpn AI**  **March 2025 – Oct 2025**
*AI/ML Intern*  *Pune, Remote*

- Created **Coding, Github, Jira agents** from scratch using Crewai
- Owned development of workflow and reduced token usage by agents by **85%.**
- Created **A2A, MCP** protocols and custom tools for github, jira and file operation.
- Built and deployed agentic workflows in Production using **Langgraph, Docker**
- **Finetuned Llama and OS vision models** for handwritten text recognition with 95% accuracy.

**buildspace**  **Aug 2024 – Sep 2024**
*Full Stack Developer*  *San Francisco Bay Area , Remote*

- Selected for a 6-week program funded by **Y Combinator, a16z**
- Built a tech product along a global community on Nightz&Weekends
- Independently built and scaled an MVP to 1000+ hits

## Projects

**LLM-from-Scratch**: Mimicked GPT2 architecture from scratch in Python and PyTorch  **Source Code**

- Developed all from **tokenization** to **pre-training** to **fine-tuning** using Python and PyTorch.
- Trained a **127M** parameter model on **CPU**.
- Achieved **46.8%** performance against Llama3-8B.

**Gemma3-GenZ**: Fine-tuned Gemma3-270M for Gen-Z style conversations  **HuggingFace**

- Curated and prepared a synthetic dataset of over 120 Gen-Z college conversations with slang and casual dialogue.
- Fine-tuned Gemma3-270M using **Parameter-Efficient Fine-Tuning (PEFT)** with **LoRA** and **SFTTrainer**.
- Used Hugging Face Transformers, PyTorch, and Python, TRL.
- Produced a fine-tuned model that generates contextually relevant and natural Gen-Z style responses.

**Research Implementations**: Implementations of **research papers** and ml concepts  **1**  **2**

- Implementations of research paper from scratch in PyTorch.
- Implementations of ML/DL concepts in python.
- Includes **MHA, GPT, RoPE, BPE, RNN, AlexNet**.

## Research Experience

**BlueBerryLLM**: contributed in MuON optimizer, helped set world record of gpt-1 1B Marathon
**Uncertainty Circuits**: Researched on Epistemic uncertainty and its nature and causalness (mech interp)

## Technical Skills

**Languages**: Python, Rust, C, C++, JavaScript, TypeScript
**ML**: PyTorch, Langgraph, scikit-learn, NumPy, Pandas, Matplotlib, HuggingFace, CrewAI, TransformerLens
**Backend**: FastAPI, Django, Node.js, Express.js
**Fronted**: React, Angular, TailwindCSS, HTML, CSS, Bootstrap
**Databases**: PostgreSQL, MongoDB, Redis
**Others**: Docker, Postman, Cursor, Copilot, GitHub, Jupyter, Colab

## Achievements

**NIT Goa 0xGenIgnite Winner**: Won a National level Web3 Hackathon held at NIT Goa.
**Logithon'25 IITB Finalist**: Finalist / Top 5 of India's Biggest Logistics Hackathon held at IIT Bombay
**World Computer Hacker League**: National Qualifier of WHCL'25