

UTKARSH GUPTA

+91 9529133103 itsutkarsh1207@gmail.com [LinkedIn](#) [GitHub](#)

Education

Indian Institute of Technology Dharwad

B.Tech, Computer Science And Engineering

2022 – Current

CPI: 9.17

Class XII Maharashtra Board

INSPIRE Scholarship awardee for achieving top 1% in board examinations.

2021 – 2022

88.83%

Class X CBSE Board

CBSE Board

2019 – 2020

94.40%

Work Experience

AI Intern

Jun 2025 - Present

Dvara-E-Registry

- Developed and implemented a price imputation pipeline for commodities, utilizing weighted correlation imputation with a 365-day rolling window to accurately fill missing price data by leveraging correlated market trends.
- Analyzed and visualized commodity price data using statistical techniques like Lasso regression and Plotly, achieving reliable imputation results (e.g., R^2 0.8) for enhanced market forecasting and decision-making.

Publications

Research Paper - IEEE ANTS 2024

Dec 14, 2024 – Dec 18, 2024

IEEE ComSoc — 5G vRAN, Energy Profiling, Kubernetes, Prometheus, Grafana

IIT Guwahati, India

- Analyzed **Radio Access Network (RAN)** components of cellular networks focusing on CPU utilization, LLC (Last-Level Cache) ways allocation, and memory bandwidth efficiency.
- Co-authored and published** research paper in the IEEE ANTS Conference 2024.

Projects

AI Playwright | Scikit-learn, NLTK, Pandas, NumPy, Pytorch



- Developed a custom subword tokenizer** inspired by BPE and WordPiece to efficiently handle rare words and reduce vocabulary size for NLP tasks.
- Built a lightweight GPT-style language model** from scratch using PyTorch, including custom attention, feedforward layers, and training loop on tokenized text data.
- Trained and evaluated the transformer model**, achieving low perplexity on the test set, with checkpointing and inference capabilities for custom sentence generation.

PARSEC Website | ReactJS, ExpressJS, HTML5, JavaScript, React Three Fiber, Tailwind



- Contributed to a React-based 3D web experience using React Three Fiber and Three.js** for an interactive and immersive event website.
- Utilized Tailwind CSS and Vite** to build responsive, high-performance UI components with efficient styling and fast development workflows.
- Integrated 3D assets and animations** into the frontend enhancing visual appeal and user engagement.

DDoS attack Detection and Mitigation in SDN | Python, Mininet, Ryu Controller



- Developed a real-time ML-based intrusion detection system for SDN environments, achieving **98.6%** accuracy using **Random Forest**.

Technical Skills

Languages : C/C++, Python, JavaScript, Bash

Frameworks / Testing : NodeJS, ExpressJS, ReactJS,MySQL, MongoDB

DevOps : Kubernetes, Docker, Prometheus, Grafana

Key Courses : Data Structures and Algorithms, Design and Analysis of Algorithms, Deep Learning, Operating Systems,DBMS

Achievements

General Secretary Academic Affairs (2025-26) and Junior General Secretary Academic Affairs (2022-24)

Assistant Student Mentor Coordinator, Student Mentorship Program(SMP), IIT Dharwad

Public Relations Coordinator, Carrer Development Cell (CDC), IIT Dharwad