Tanaya Pawar

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SUMMARY

Master's student in CS at NYU with experience in full-stack development, backend systems & applied machine learning. Focused on building scalable, high-impact software with strong foundations in computer science and AI

EDUCATION

New York University — New York, USA
Masters in Computer Science, GPA: 3.88/4 — Aug 2024 - May 2026
Coursework: Machine Learning, Open Source, Software Engineering, Big Data, Deep Learning, Algorithms

Savitribai Phule Pune University — Pune, India
Bachelor Of Engineering in Computer Engineering *with distinction*, GPA: 8.64/10 — Aug 2020 - June 2024
Coursework: Data Structures, Object Oriented Programming, Operating Systems, Cloud Computing

EXPERIENCE

New York University, New York, USA | *Grader/Tutor* — Sep 2025 - Present
- Assessed assignments, doubts and code submissions for graduate level Programming Languages course, ensuring accuracy in functional programming, OOP, and syntax with providing required feedback for 60+ students

Referrio, New York, USA | *Full Stack Developer Intern* — June 2025 - Aug 2025
- Developed a full-stack web app with **React, Next.js**, TailwindCSS & ShadCN UI improved UX & data latency
- Designed & containerized backend services using Node.js & Express, deploying microservices on GCP
- Built and tested REST APIs with postman ensuring 100% data integrity, automated CI/CD via GitHub Actions
- Created a real-time support system using PostgreSQL and WebSockets, cutting internal resolution time by 20%
- Delivered features in Agile sprints, accelerating product iteration in a fast-paced startup environment

Wilo Mather And Platt, Pune, India | *Data Analyst Intern* — Oct 2022 - Dec 2022
- Built dashboards using **Power BI** & **SQL** to track financial risk & optimize a **$23M** budget across departments
- Delivered monthly reports with cost alerts, helping cross-functional teams identify their high-expense areas
- Reduced expenses by **38%** in 2022 by analyzing employee behavior and operational spending patterns

PROJECTS

CrisisCast | GitHub | *Apache Kafka, Pyspark, MongoDB, Docker, FastAPI, Qdrant*
- Built real-time crisis detection system ingested 1k+ msgs/sec via Reddit, Bluesky with **Kafka**, **Spark** & **Docker**
- Served a fine-tuned flan-t5-base LLM via FastAPI to reduce false positives & improve crisis classification
- Developed a fault-tolerant backend with MongoDB and Qdrant; built a Streamlit dashboard used to track trends and surface high-risk posts in real time

Parameter-Efficient Transformer | GitHub | *PyTorch, Hugging Face, LoRA, Python*
- Fine-tuned **RoBERTa**-base on AG News using **LoRA**, training just 0.4% of weights for parameter efficiency
- Achieved **92.3%** test accuracy in 3 epochs, outperforming full fine-tuning with 99.6% fewer parameters
- Reduced GPU memory by **50%** and training time to under 5 min/epoch, enabling fast, scalable deployment

Comparative Analysis of LLMs | GitHub | *Hugging Face, PyTorch, LLM's*
- Explored BERT and GPT by implementing both architectures from scratch and fine-tuning them for NLP tasks
- Trained scaled-down BERT, GPT on WikiText & fine-tuned on SQuAD, CNN/DailyMail using transfer learning
- Achieved losses of **1.67 (BERT) & 2.97 (GPT)**, highlighting strengths in question answering & summarization
- Implemented a modular **inference pipeline** for **real-time** predictions and model performance

PUBLICATIONS

"Precision Farming Methods Using Machine Learning", Agro-Advice | *ICESTM* — Feb 2024
- Conducted an analysis of 24 ML crop recommendation systems, identifying gaps in microclimate adaptability & model robustness across regions
- Proposed hybrid Random Forest & XGBoost model for precision agriculture, improved yield prediction accuracy by 17.3% including a paired cropping optimization algorithm that demonstrated 22% yield improvement

SKILLS

Programming: Python, JavaScript, C++, R, Typescript, SQL(MYSQL, PostgreSQL), NoSQL(MongoDB), Figma
Frameworks: Django, Django Rest Framework, React, NextJs, Nodejs, Expressjs, TailwindCSS, ShadCN UI
Libraries: Streamlit, Tensorflow, Keras, Sci-kit Learn, Pandas, NumPy, NLTK, PyTorch, OpenCV, Matplotlib
APIs and Tools: REST APIs, Apache Kafka, Power BI, Tableau, Hadoop, Spark, Postman, Linux
Cloud: GCP (Cloud Run, Storage, SQL), AWS (EC2, S3, RDS), Docker, GitHub Actions CI/CD, Kubernetes