Tanaya Pawar

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EDUCATION

New York University New York, USA
Masters in Computer Science, GPA: 3.88/4 Aug 2024 - May 2026
Coursework: Machine Learning, 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 — Programming Languages* Starting Sep 2025
- Selected to evaluate assignments and projects for a graduate-level course covering **Scheme**, **ML**, and **Prolog**
- Will provide feedback on functional programming code, ensuring conceptual understanding and code correctness

Referrio, New York, USA |*Full Stack Developer Intern* June 2025 - August 2025
- Engineered a scalable **fullstack** application for a startup using **Next.js** and **React.js** to modernize internal workflows, resulting in 40% improvement in system responsiveness and 25% reduction in backend latency while collaborating with cross-functional teams for enhancing overall feature usability aligning with customer needs
- Established structured **API** integration with Axios and **RESTful** endpoints, improving frontend and backend communication, while achieving **100%** data consistency, and reducing sync issues by **30%**
- Built a secure, real-time support ticket system using **Next.js** server actions and Prisma ORM, allowing the authenticated issue tracking and significantly enhancing user experience and system responsiveness

Wilo Mather And Platt, Pune, India |*Data Analyst Intern* Oct 2022 - Dec 2022
- Engineered data solutions to monitor **financial risk**s and expenses and optimize **$23M** annual budget using **Power BI and SQL APIs** to streamline financial analytics for **cross-functional** teams
- Prepared monthly status reports and presented findings to cross-functional teams along with alert to identify high cost areas & potential cost savings opportunities
- Achieved a **38%** reduction in expenses using data analysis over **2022** by analyzing employee behavior patterns

PROJECTS

CrisiCast |*Apache Kafka, Pyspark, MongoDB, Docker, Qdrant*
- Built real time emergency detection pipline by ingesting Reddit data using **Kafka, Spark** Structured Streaming
- Integrated a locally hosted LLM-based classifier to tag crisis posts, storing enriched metadata in MongoDB
- Embedded **1,000+** Reddit posts using Sentence Transformers, stored semantic vectors in Qdrant
- Designed interactive plotly dashboard for real-time crisis trends and semantic search across incoming posts

Parameter-Efficient Transformer for scalable NLP classification |*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 LLM's | *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 3 2024
- Conducted systematic analysis of 24 peer-reviewed studies on ML-driven agricultural recommendation systems
- Identified critical gaps in existing models,insufficient data and limited adaptability to microclimate variations
- Proposed hybrid approach combining Random Forest and XGBoost algorithms, improving prediction accuracy by 17.3% introduced paired cropping optimization demonstrating 22% yield improvement in experimental validation

SKILLS

Programming: Python, JavaScript, C++, R, HTML, CSS, Typescript, SQL, MongoDB
Frameworks: Django, Django Rest Framework, React, NextJs, Nodejs, Expressjs, Bootstrap
Libraries: Streamlit, Tensorflow, Keras, Sci-kit Learn, Pandas, NumPy, NLTK, PyTorch, OpenCV, Matplotlib
APIs and Tools: REST APIs, Power BI, Tableau, Microsoft Office, Hadoop, Spark, Linux
Cloud: AWS, Kubernetes, Docker, Snowflake