ANUSHKA TAWTE

Machine Learning Engineer, New York
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Education

New York University, New York **Expected May 2025**
Master of Science in Computer Science *GPA: 3.75*
- Coursework: Machine Learning, Data Science, Big Data, Design and Analysis of Algorithms, OS, Information Security and Privacy, Open Source, Decision Models and Analytics (NYU Stern)

University of Mumbai, Mumbai, India **August 2019 - July 2023**
Bachelor of Engineering in Computer Engineering *GPA: 3.8*
- Relevant Coursework: Artificial Intelligence, Quantitative Analysis, ML, Deep Learning, Natural Language Processing

Technical Skills

Languages and Platforms: Python, SQL, R, C++, C, JavaScript, Java, Bash, HTML/CSS, GCP, AWS (EC2, S3)
Database systems and Tools: PostgreSQL, MongoDB, MySQL, Linux/Unix, Windows, Git
Technologies/Frameworks: Tableau, PyTorch, Dask, Spark, Scikit Learn, LLMs, RAGs, Tensorflow, OpenCV
Algorithms :Decision Trees, Random Forests, Neural Networks, KNN, Kmeans, DBScan, Regression, ARIMA
Certifications: Machine Learning with DeepLearning.ai, 30 days of Google Cloud, Python 3

Projects

Finetuning TTS for Voice Cloning **September 2024 - December 2024**
- Developed a personalized TTS model using XTTS, fine-tuning it for multiple accents, achieving a 30% lower overall loss compared to the base model within 6k training steps.
- Enabled speech restoration for ALS patients by creating an accent-adaptive model with mel-spectrogram cross-entropy loss reduced by 25%, preserving voice identity for improved communication.

NYC Car Crash Detection **March 2024 - May 2024**
- Leveraged Spark and Dask ML to manage and analyze the extensive datasets of traffic, weather, and historical crash data, developing a Random Forest model that effectively predicted traffic accident hotspots with a 0.72 F1 score.
- Created an interactive dashboard using Streamlit, which visualizes real-time data to aid in strategic decision-making.

Spinescan AI **July 2022 - April 2023**
- Enhanced diagnostic accuracy by developing a Convolutional Neural Network (CNN) using the EfficientNet architecture and Tensorflow, achieving a 95.2% classification accuracy rate for vertebral DICOM images.
- Advanced fracture detection capabilities by integrating YOLOv5 object detection, attaining an 86% accuracy rate, demonstrating proficiency in deep learning and medical image analysis.

Malware Detection using Images **July 2021 - February 2022**
- Developed a novel CNN (Convolutional Neural Network) to counter code obfuscation, leveraging binary representational images for malware identification, achieving a 92.7% accuracy rate.
- Authored a published paper in IEEE Xplore, highlighting capabilities in security and research publication [link].

Experience

Researcher **November 2024 - Present**
VIDA Lab @NYU
- Designing a multiscale scatter plot visualization technique to handle large single-cell datasets for pathologists
- Implementing different clustering techniques and semantic zooming to reduce clutter and highlight cell similarities.
- Working on creating a specialized tool, enabling a drill-down from cell clusters to detailed views for cancer detection.

Senior Developer **August 2020 - November 2022**
Technical Team SIESGST
- Led the strategic migration of the android application's codebase from Java to Kotlin, significantly enhancing code maintainability and leveraging cutting-edge language capabilities for increased efficiency.
- Implemented Jetpack Compose to revolutionize the app's UI/UX design, catalyzing a 300% increase in user engagement, growing from 500 to over 2,000 active users.

Extra-Curricular

- Won multiple hackathons, including one hosted by GDG NYC for an innovating an AI project
- Led a team of 30+ members to organize a successful TEDx event, surpassing attendance figures by 40%
- Developed an educational curriculum for children in rural India and enhanced the NGO's outreach
- Part of the college dance team, achieving over 6 victories in a year in inter-college dance contests at various locations