Ishant Kundra

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Education

Texas A&M University, College Station, TX — Aug. 2023 – May 2025
Master of Science in Computer Science — GPA: 3.7

University of Texas Austin, Austin, TX — Jun. 2022 – May 2023
Post Graduate Program in Artificial Intelligence and Machine Learning — GPA: 3.97

SRM University, Chennai, IN — Jun. 2018 – May 2022
Bachelor of Science in Computer Science — GPA: 3.96

Work Experience

Reliance Jio AICOE — Jun. 2024 – Aug. 2024
AI/ML Intern

- Built an end-to-end scalable language identification system, improving accuracy by **20%** across **22 Indian languages**, leveraging **Python**, **PyTorch**, **TensorFlow**, and advanced **Natural Language Processing (NLP)** techniques with automated data pipelines for data collection, preprocessing, and model optimization.
- Processed and cleaned **1,200+ audio files** using **Voice Activity Detection (VAD)**, denoising algorithms, and audio chunking, generating **95% clean data** to enhance model training efficiency.
- Developed and fine-tuned language classification models using **IndicWav2Vec** and **Hugging Face Transformers**, boosting prediction accuracy by **20%** and achieving an **F1-score of 0.91**.
- Built scalable data scraping and ingestion pipelines using **Python**, **YouTube-DL**, and **FFmpeg**, automatically downloading, segmenting, and organizing **hundreds of hours** of multilingual speech data for supervised learning models.

Impetus Technologies — Dec. 2021 – Jun. 2022
Project Trainee Intern

- Developed and evaluated **Machine Learning (ML)** models (**CNN**, **KNN**, **Random Forest**, **Logistic Regression**) for **fake profile detection**, selecting **CNN** as optimal, achieving **70% accuracy** and reducing false positives by **25%**.
- Designed a **hybrid detection system** combining **image-based verification** (**CNN** for profile picture analysis) with **Natural Language Processing** techniques (**TF-IDF**, **BERT**) to analyze chat behavior, improving model interpretability and trust.
- Deployed **scalable solutions** using **Python**, **Scikit-learn**, **TensorFlow**, and **Flask**; published findings in *JETIR*, detailing methodology and future extensions including **biometric** and **document-based verification**.

Cartesian Consulting — Jul. 2021 – Aug. 2021
Software Developer Intern

- Improved forecast accuracy by **10%** by assisting in **model selection** and **data transformation** for a **demand forecasting system**.
- Helped build a **recommendation engine** using **collaborative filtering**, **rule mining** (**Apriori**, **FP-Growth**), and **customer clustering** with **K-Means**.

Project Experience

NeuroStockViz (TAMU) — Python, Flask, JavaScript, D3.js, Chart.js, yFinance — Apr. 2025

- Led development of an interactive stock correlation platform using **Flask**, **Pandas**, **yFinance**, **D3.js**, and **Chart.js**, enabling real-time sector-based analysis through dynamic filtering, clustering, and rich visualizations.

CLIP Training: Loss Functions & Optimizers (TAMU) — Python, PyTorch, Contrastive Learning — Nov. 2024

- Proposed a custom Dynamic Temperature Loss and evaluated 5 losses + 4 optimizers on 100K CLIP-style pairs; iSogCLR + RAdam achieved **84.6% Recall@5**.

AI Plays Pokemon Red (TAMU) — Python, Deep Learning, Proximal Policy Optimization — Nov. 2024

- Programmed a Python-based Reinforcement Learning agent using Q-learning, Deep Q-Network (DQN), and Proximal Policy Optimization to autonomously play Pokémon Red, enhancing exploration with curiosity-driven intrinsic motivation.

Student Housing NLP Chatbot (TAMU) — Python, PyTorch, Flask, Spacy — May 2024

- Developed a custom **NLP chatbot** using **Flask** and **Spacy** to assist **200+** students with apartment search, cutting search time by **30%** through intent detection and dynamic response handling.

Yelp Restaurant Reviews Sentiment Analysis (TAMU) — Python, Keras, TensorFlow, NLTK — Dec. 2023

- Built a Long Short-Term Memory (LSTM) RNN model to classify Yelp restaurant reviews into positive, negative, and neutral categories with **99.81% accuracy**.

Skhedule.com (TAMU) — Ruby, Keras, TensorFlow — Nov. 2023

- Launched and released a web platform for event organizers to create and manage events, leveraging Ruby on Rails for backend functionality and Heroku for scalable cloud deployment.

NLP Chatbot for Industrial Safety (UTA) — Python, TensorFlow, OpenCV — Jun. 2023

- Created a chatbot for monitoring industrial safety and health analytics, leading to publication in *Chatbot for Industrial Safety and Health Analytics Database using NLP and Machine Learning*.

Technical Skills

Languages: Python, C, C++, Java, JavaScript, Ruby, HTML/CSS, SQL, MySQL
Technologies: REST API, API Development, Multiprocessing, Google Colab, Linux
Databases/Tools: MongoDB, PostgreSQL, PL/SQL, GitHub, Jenkins, Docker, Tableau, AWS, Anaconda, Heroku, Jira, VS Code, Android Studio
Frameworks/Libraries: Flask, React, Ruby on Rails, QT, TensorFlow, PyTorch, Keras, Scikit-learn, Pandas, NumPy, OpenCV, NLTK, Spacy