Dhairya Jayesh Chheda

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Education

Master of Science (M.Sc.) in Data Science — August 2023 – May 2025
Indiana University – Bloomington, IN, USA — *GPA: 3.9/4.0*

Bachelor of Engineering (B.Eng.) in Information Technology — August 2017 – May 2021
University of Mumbai – Mumbai, Maharashtra, India — *GPA: 9.62/10.0*

Technical Skills

Languages: Python, R, SQL, Java, C/C++, HTML/CSS, PySpark
Frameworks: Numpy, Pandas, Matplotlib, Scikit-Learn, NLTK, Spacy, Tensorflow, Keras, Pytorch, HuggingFace
Machine Learning: Statistics, EDA, Feature Engineering, Dimensionality Reduction, Supervised Learning, Unsupervised Learning, Predictive Modeling, Regression, Classification, Decision Trees, Random Forest, XGBoost, SVM, Naive Bayes, K-Means Clustering, Multi-Modal Deep Learning Techniques, Natural Language Processing, Generative AI, Large Language Models (LLM)
Developer Tools: Google Cloud Platform (GCP), Amazon Web Services (AWS), GitHub Actions, Docker, Jenkins, JIRA, DVC

Professional Experience

Machine Learning Engineer Co-op Intern — September 2024 – Present
Jiseki — *San Mateo, CA, USA*
- Developed a conversational agent by blending **Google's Voice Activity Detection (VAD)** to capture and convert speech to text, **OpenAI's Text-To-Speech (TTS)** and **Pygame** for voice generation and smooth audio playback.

Data Scientist Summer 2024 Intern — May 2024 – July 2024
Indiana University — *Bloomington, IN, USA*
- Involved in curation of new text dataset of 10K+ records for comprehensive exploratory data analysis and model development.
- Optimized multi-label text classifiers using **RoBERTA** and **active learning**, achieving 60% F-1 score with limited labeled data.
- Worked on **Information Extraction** in a **Few-Shot Incremental** setting for meta-analysis using LLMs based on **OpenAI API like GPT-4**, **Langchains** and **Retrieval-Augmental Generated (RAG)** pipelines.
- Enhanced a text summarization model utilizing **BART** to visualize insights from a large corpus of visually rich documents.

Software Engineer — June 2021 – July 2023
LTIMindtree — *Mumbai, Maharashtra, India*
- Streamlined CRUD extraction with **Python** and **SQL** automation, saving over 4 days of manual effort.
- Constructed Python scripts for data migration and cleaning, particularly for **Teradata** and **PeopleSoft DB2** transfers.
- Optimized ETL pipelines using **AWS Glue**, **Amazon Redshift**, and **Amazon S3** to integrate and harmonize data from various sources into a centralized **data warehouse**, enhancing data pipeline scalability and efficiency by 50%.

Research Experience

Artificial Intelligence Research Intern | Hawkeye MedTech — September 2019 – June 2020
Guide: Dr. Nilakshi Jain, Head of Department, University of Mumbai — *Columbia, MD, USA*
- Performed **named-entity recognition** to extract data from unstructured text followed by **embedding and similarity matching** using **ClinicalBERT**, improving disease prediction accuracy by 18%.

Modeling Human Tendencies for Password Guessing | Publication — August 2020 – January 2022
Guide: Dr. Dhanashree Toradmalle, Professor, University of Mumbai — *Mumbai, Maharashtra, India*
- Trained **LSTM**, **GRU**, and **GAN** seq2seq models totaling 4.8M+ parameters to generate human-like passwords that matched ∼55% of the 14M+ passwords within 10^9 guesses.

Projects

Image and Text Classification using Transfer Learning — *EDA, DistilBERT, ResNet, Neural Networks*
- Conducted Exploratory Data Analysis (EDA) on **1K+** text files using regex, pandas and stemming.
- Implemented transfer learning on transformer models like **DistilBERT** to classify images and text, achieving 95% accuracy.

Student Performance Prediction using ML — *Decision Tree, Random Forest, XGBoost, Ensemble Learning*
- Enhanced model performance by applying **ensemble learning** techniques such as the voting, bagging and stacking methods, boosting F-1 score to 0.86, surpassing individual prediction results.
- Created user-friendly applications using **Streamlit** for deploying ML models.

Airbnb Booking Analysis and Recommendation using Machine Learning on GCP — *PySpark, BigQuery, Looker*
- Utilized **PySpark** for distributed data processing and transformation, reducing data processing overhead by 40%.
- Visualized data on **GCP BigQuery** and **Looker** to uncover trends and insights, and recommend strategic business-decisions.

Achievements / Extra-Curriculars

2024 – President, Data Science Club: Responsible for mentoring students, inviting industry experts and organizing events.
2023 – Pat on the Back: Performance Award from the manager for my exemplary contributions to deliver the project 'MFGOG'.
2022 – Volunteer, SankalpTaru Foundation: Planted a seed as my contribution towards the mother nature: a DEI initiative.
2022 – BU of the Year: GoMX Annual Hall of Fame Award for leading a team of 5 members to deliver a client-facing project.
2018 – Academic Merit: University Honors' Award for the best academic performance among all freshmen.