Dhairya Jayesh Chheda

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EDUCATION

Master of Science (M.Sc.) in Data Science

Indiana University - Bloomington, IN, USA

Bachelor of Engineering (B.Eng.) in Information Technology

University of Mumbai - Mumbai, Maharashtra, India

August 2023 - May 2025

GPA: 3.9/4.0

August 2017 – May 2021

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

· 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

San Mateo, CA, 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.
- Contructed 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 Mumbai, Maharashtra, India

Guide: Dr. Dhanashree Toradmalle, Professor, University of Mumbai

• Trained LSTM, GRU, and GAN seq2seq models totaling 4.8M+ parameters to generate human-like passwords that matched \sim 55% of the 14M+ passwords within 10⁹ 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 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.