

ANAGHA PATIL

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EDUCATION

PES University

Bachelor of Technology in Computer Science and Engineering

2020 - 2024

CGPA: 8.89. *Specialisation:* Machine Intelligence and Data Science

Relevant Coursework: Machine Intelligence, Deep Learning, Natural Language Processing, Data Analytics, Big Data

Achievements: 4x recipient of MRD Scholarship (40% tuition fee waiver for top 20%), 2x recipient of DAC Scholarship

TECHNICAL SKILLS

Languages: Python, C, Java

AI/ML: PyTorch, pandas, numpy, scikit-learn, HuggingFace, NLTK, Keras, TensorFlow, LangChain

Data & Visualization: Pyspark, MySQL, PyPlot, SeaBorn, Voxel51, Plotly, Tableau

Cloud/Web: Azure ML, Databricks, AWS, HTML/CSS, Django, Git

EXPERIENCE

ML Engineer

Aug 2024 - Present

Bosch Global Software Technologies

- Working in the Poles and Boom Gates Detection team for ADAS development in autonomous vehicles
- Built the initial data preparation and loading pipeline for boom barrier detection
- Developing deep neural networks, including data preparation, loading, and network training, for pole object detection on different camera types

MLOps Intern

Jan - May 2024

Bosch Global Software Technologies

- Worked in the Traffic Lights Detection team for ADAS development in autonomous vehicles
- Generated ~1L augmented traffic lights data and engineered an end to end pipeline to perform training on Azure ML
- Improved traffic lights detection performance of underrepresented classes by ~10% to ~25% through augmentation
- Identified and resolved a bug leading to imprecise evaluation metrics, ensuring accurate metric assessments post-training

MLOps Summer Intern

June - July 2023

Bosch Global Software Technologies

- Worked under Video Perception team for ADAS development for autonomous vehicles
- Visualised and mapped traffic images to their corresponding geo-locations on the map
- Logged custom metrics for jobs in Azure Machine Learning and displayed them in Microsoft Teams

TEACHING EXPERIENCE

Teaching Assistant

Aug - Dec 2023

PES University *Course:* Machine Intelligence

- Prepared course slides and assignments
- Mentored ~60 students in course lab work
- Organised and guided students in Machine Intelligence Hackathon

PROJECTS

Lecture Video Doubt Clarification System | Capstone Project

Developed interactive, real-time user query response system for e-learning videos utilizing Transformers, LLMs, and CV

NSE Market Data Analysis

Developed visualisation charts and generated buy/sell signals for real time NSE market data from Moneycontrol

Market Basket Analysis using ML algorithms

Analysed customer buying patterns using XGBoost, RFC and Logistic Regression to increase grocery store sales

Text Summarisation of Literature Papers

Developed a system for literature paper summarisation via extractive summarisation

Yet Another MapReduce

Implemented Hadoop's MapReduce in Python using Socket Programming for master-worker node communication, supporting custom input, mapper and reducer files, with adjustable worker node count for read, write or map reduce operations

PUBLICATIONS

[1] Transformative Approaches to E-Learning Videos: Generative vs. Extractive Question Answering for Enhanced Doubt Clarification, **CODEAI 2024** (Accepted for Publication)

[2] LVDCS: Minimising Doubts in Distance Learning, **ISDIA 2025** (Accepted for Publication)