

Muskaan Walia

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EDUCATION

- **Plaksha University**, Postgraduate in Artificial Intelligence, Machine Learning and Leadership, *Aug 2022 – Jul 2023* CGPA: 8.5
- **Kalinga Institute of Industrial Technology**, Computer Science and System Engineering, *Jul 2018 – May 2022* CGPA: 8.6
- **Carmel Junior College**, 12th — ISC, *Mar 2017 – Apr 2018* 85 %
- **Carmel Junior College**, 10th — ICSE, *Mar 2015 – Apr 2016* 94%

Online Courses: Predictive Analytics for Business – NanoDegree (Bertelsmann Tech Scholarship), Machine Learning (DeepLearning.ai), Deep Learning and Neural Networks (DeepLearning.ai), Data Science (DataCamp), Machine Learning (iNeuron.ai)

WORK EXPERIENCE

JM Financial – TLP Capstone

Data Science Intern

March 2023 – May 2023

- **Researched and implemented** different **generative LLM – (Alpaca, Gpt, Dolly, Llama, Vicuna, BART)** models to generate abstractive **summaries** and automated the process for **1500+ financial documents** using **Facebook Bart** model, with a **Rouge Score 7%** higher than other models.
- Worked extensively with **LangChain** Framework, **Open AI** and **HuggingFace API** calls for Abstractive Summarization.
- Spearheaded the integration of **Nudge Engine** with **BlinkX Trading** App, enhancing user experience and driving a **4% increase** in app downloads, translating to **600+ new users**.

Providence Global

Application Analyst Intern

Jan 2022 – June 2022

- Resolved **100+ service requests** and **incidents** for integrated applications such as Avasys Telesitter, DeviceConX, and Spacelabs.
- Collaborated on **research** to update **obsolete servers**, resulting in a **12% increase** in server performance improving response times and reducing downtime.

PROJECTS

Multilingual Recipe Recommendation System

[\(GitHub Link\)](#)

- Employed **GoogleTrans** and **langdetect** NLP libraries to streamline **translation** and preprocessing of a robust **6871+** recipe dataset with **14 features** from **28 languages**, enabling proficient **Tf-idf** and **Word2Vec text vectorization**.
- Engineered a **K-Means** clustering-based **recommendation system**, delivering **top 5 personalized** recipe options, responsive to user-defined preferences.
- Introduced an allergy-aware feature, enhancing **user experience** and **personalization** by filtering out allergenic recipes.

YouTube Toolkit Web Application

[\(GitHub Link\)](#) [\(Try It Out\)](#)

- Developed a YouTube Toolkit web application using **LangChain**, **Streamlit**, and **OpenAI's Large Language Models**, serving as an all-in-one platform for YouTube creators and viewers.
- Within 24 hours of launch, the application successfully processed and generated resources for **50+ YouTube videos**, showcasing its **scalability** and value potential.

Higgs Boson Classification

[\(GitHub Link\)](#)

- Implemented an **XGBoost Classifier** to distinguish between signal and background processes in a dataset of **3.5 million** data points, achieving a test data accuracy of **80.4%**.
- **Optimized** model performance through **cross-validation** for **hyperparameter tuning**, resulting in a **5% accuracy** boost.

Toxicity Analysis of Tweets

- Developed an **LSTM** model sentiment classifier, analyzing, visualizing, and **preprocessing** a massive text corpus of **53,000** tweets.
- Utilized **AutoTokenizer** and **RoBERTa** for accurate **tweet classification** into Positive, Neutral, and Negative categories, achieving an impressive **83% accuracy**.

SKILLS

- **Data Science:** Machine Learning, Deep Learning, Recommendation System, Data Visualization, Exploratory Data Analysis, Statistics, Linear Algebra, MLOps, Web Scraping, Feature Engineering, Natural Language Processing, LLMs, Transfer Learning
- **Engineering and Tools:** Python (Scikit-Learn, Pandas, NumPy, BeautifulSoup, Seaborn, NLTK, LangChain, Matplotlib, Plotly, Spacy, Tensorflow), HTML, Rest API, Google Cloud, AWS, Tableau, ServiceNow, SQL, Streamlit, HL7, MS-Excel, Alteryx
- **Product and Design:** Figma, Prototyping, Ideation, Prioritization, Wireframing

PUBLICATIONS

- Muskaan Walia, Subandhu Agravanshi, under Dr. Sushruta Mishra, "Understanding **CNN** based models applied to interpreting **ECG data**", **Springer** 2022.

ACHIEVEMENTS

- Represented Jamshedpur as **Head Goalkeeper** for **Junior Women's Football Tournament Regionals**.
- Contributed to social initiatives as an **HR Intern** at **Desire Foundation**, an **NGO** focused on expanding **educational opportunities** for underprivileged children in compliance with **RTE Act Section 12(1)(c)**.
- Selected as a **board member** of the **Student Academic Committee** at Plaksha, serving as a cohort representative, and addressing academic concerns and grievances.