

**Education****MS in Computer Science | George Mason University, USA**

January 2021 - December 2022

**Bachelors in Computer Science & Engineering | GITAM University, India**

June 2015 – April 2019

**Relevant Coursework:** Analysis of Algorithms, Theory and Application of Data Mining, Software Engineering for the Worldwide Web, Database Management Systems, User Interface Design and Development, Mobile Immersive Computing, Advanced Natural Language Processing, Object Oriented Software Specification and Construction, TensorFlow Deep Learning and AI**Machine Learning: Natural Language Processing in Python | UDEMY**(UC-4f54538e-1df7-4755-aed5-598db712dfe9)**Work Experience****Software Engineer ML | Tech Talent Connect, USA**

May 2023 – Present

*Python, TensorFlow, PyTest*

- Working on models for intent recognition, entity recognition and sentiment analysis for a Text Based Virtual Assistant using **Large Language Models (GPT)**

**Information Technology Teaching Associate | George Mason University, USA**

August 2021 – December 2022

- Providing practical training to students at undergraduate level in several new age **Data Mining & Machine Learning Algorithms, Web Technologies, Cloud Technologies, Databases, Cybersecurity Techniques** and designing projects, tasks and assignments to correspond to their overall understanding of data science, networking and computing technologies.

**Software Engineer | Tata Consultancy Services, India**

January 2020 – January 2021

*Java, HTML5, CSS3, jQuery, JavaScript, Azure*

- Implemented various Validation Controls for form validation and implemented custom validation controls with **JavaScript** and **jQuery**. Developed dynamic web pages using **HTML5, CSS3, jQuery, AJAX, JSON and XML**.
- Worked extensively on **Azure** in a **DevOps** environment. Developed and deployed various Micro Services using automated **(CICD) Continuous Integrations and Continuous Deployments**.
- Using **Agile methodology** and **SCRUM** to study the system, consolidating requirements, establishing interposes relations and team communication

**Project Experience****Identification of Italian Language Dialects***Python, PyTorch, NumPy, NLTK, BERT*

- Implemented a transformer model to identify **11** different dialects of Italian Language using Natural Language Processing techniques on over **260516 documents** from Wikipedia dumps.
- Trained a **BERT** model from **HuggingFace** to accurately identify dialects and achieved an **81% accuracy**. Improved and analyzed model performance and interpretability using language-specific techniques.
- Utilized **Python, PyTorch**, and **NLP** techniques to fine-tune transformer models.

**Text Classification With Neural Nets***Python, TensorFlow, NLTK*

- Executed the implementation of a **Feed Forward Neural Network** to construct a sentiment classifier, categorizing movie reviews sourced from Rotten Tomatoes into positive and negative classes using **Python** and **TensorFlow**.
- Developed the **FFNN model**, drawing inspiration from the **Deep Averaging Network model**. Incorporated **Word2Vec** embeddings and employed an **ADAM optimizer** for the initial classification.
- Attained a notable **78.7% accuracy** for our model by systematically exploring performance variations. Experimented with **different learning rates, vector dimensions, optimization methods, and integrated open-source GloVe embeddings** to optimize and enhance efficiency.

**Fake News Vs Real News***Python, Pandas, Sklearn, Spacy*

- Implemented a **two-phase classification model** on a text dataset of news articles predicting the authenticity (real or fake) and categorizing articles based on their content using **Python**.
- Applied **Natural Language Processing techniques**, leveraging libraries like **Pandas, Sklearn, and Spacy** for data preprocessing. Conducted feature extraction, implemented various **classification models**, and selected the most efficient model with an impressive accuracy of **96.3%**.

**Credit Risk Prediction***Python, Pandas, Matplotlib, Sklearn*

- Developed a predictive** model that classifies every given individuals credit risk as high and low risk using **Python** libraries **Sklearn, Pandas** and **NumPy**. **Analysed the correlation** among all the features of the training data to understand how each feature is impacting the credit scores of the individuals and represented them using **Matplotlib**.
- Implemented **SVM, Decision Tree Classifier, Random Forest Classifier** and the **XGBoost Classifier** all four models to predict the risk and observed that the **Ensemble Methods** like RFC and XGB classifiers are **12%** more efficient compared to others.