Vaishnavi Shah

Sunderland, MA | (413) 475-8845 | vaishnavisha@umass.edu | linkedin.com/in/vaishnavirahulshah

EDUCATION

University of Massachusetts, Amherst, United States **Exp. Graduation May 2025**
Master of Science in Computer Science **(GPA 4.0)**
Software Engineering, Distributed Systems, Information Retrieval

Veermata Jijabai Technological Institute, Mumbai, India **May 2023**
Candidate for Bachelor of Technology in Computer Engineering with *Distinction* **(CGPA 9.19/10)**

WORK EXPERIENCE

Veermata Jijabai Technological Institute, Mumbai, India **August 2022 – May 2023**
Research Assistant under Dr. Sunil G Bhirud - Director of VJTI

- Developed Named Entity Recognition model to identify drugs' chemical and street names from unstructured data obtained by crawling the Tor web URLs.
- Authored paper detailing inferences and presented results at prestigious IEEE International Conference of Trends in Quantum Computing and Emerging Business Technologies 2022.

Morgan Stanley, Mumbai, India **May 2022 – July 2022**
Technology Analyst Intern

- Engineered a Long and Short-Term Memory (LSTM) Auto-Encoder model in Python using Keras Deep Learning Library to enhance anomaly detection in system-generated alerts.
- Conducted comprehensive data augmentation and feature engineering, meticulously selecting relevant features to mitigate overfitting, resulting in a highly accurate model.
- Collaborated with cross-functional teams to integrate the anomaly detection system with their data, contributing to the enhancement of the entire department's alert monitoring.

PROJECTS

Leveraging Common Sense Knowledge Graphs for Text Analysis

- Executed advanced techniques utilizing natural language processing, machine learning, and data mining to extract insights from unstructured data sources on the dark web.
- Implemented cutting-edge preprocessing methods utilizing NLP models, entity extraction with Zero-Shot Learning and ConceptNet, and relation extraction through dependency parsing and rule-based matching.

CVRP-based Delivery System for Farmers Market E-commerce

- Developed e-commerce grocery shopping website using NodeJs, ExpressJs, and Firebase, enhancing user experience with features like pagination, filtering, fuzzy search.
- Created an efficient delivery system based on genetic algorithms and its crossover techniques, optimizing delivery routing for orders and reducing delivery times.

Advanced Skin Lesion Classification with Deep Learning

- Deployed deep learning techniques such as Convolutional Neural Networks (CNN) for skin lesion classification using images consisting of 7 different classes of skin diseases.
- Built CNN models using image recognition architectures, and compared the accuracy reached with each model.
- Constructed modified Vision Transformer with two new layers to improve model's accuracy and presented results at IEEE – International Conference on Advances in Science & Technology 2022.

Hifaazat - Emergency Response and Safety Application

- Formulated a safety application using Flutter and Firebase and implemented an emergency SOS feature that notifies predefined contacts or authorities with a single button press.
- Integrated with Google Maps API to enable real-time location sharing with saved contacts during emergencies.
- Connected a shake plugin for gesture-based SOS activation, enhancing user convenience.

TECHNICAL SKILLS

- Technologies: C, C++, Python, Java, Javascript, HTML/CSS, Flutter, ExpressJS, NodeJS, React, Flask, Django, MATLAB
- Data Management: MySQL, Firebase, MongoDB, AWS
- Machine Learning Tools: Scikit-Learn, Keras, NumPy, Matplotlib, TensorFlow

EXTRACURRICULAR ACTIVITIES

- Secured 1st position out of 200 teams in HackGirlSummer2.0 (June 2021) for designing HonestHire, a groundbreaking web application aimed at promoting gender equality by blind hiring practices.
- Achieved 2nd position in the National Level Hackathon ERR404 (March 2021), for building a processing system to address the requirements of the Bitkraft company.
- Tutored underprivileged children with non-profit The Girl Code (November 2021 to June 2022). Conducted technical workshops positively impacting the lives of around 50 girls, empowering them with skills and knowledge.
- Actively contributed to an Open Source program called Script Winter of Code (January 2021 to February 2021). Created a website for a GitHub repository and prepared a Python script for automating the process of sending WhatsApp messages, showcasing proficiency in coding and automation techniques.