

Vaishnavi Shah

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EDUCATION

University of Massachusetts, Amherst, United States

Exp. Graduation May 2025

Master of Science in Computer Science

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 VITI

- 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 three 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
- 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.