Shrey Modi

youremail@gmail.com
LinkedIn
GitHub

Contact Number
My Location
Personal Website
Google Scholar

About Me

Dedicated, **Innovative developer** with **Strong Interpersonal skills**. I thrive in a **Fast-paced, Collaborative environment**, leveraging my **Communication and Adaptability** to foster strong working relationships.

Education

California State University Long Beach — Long Beach, California
Master of Science in Computer Science — Expected: January 2025

Charotar University of Science and Technology (CHARUSAT) — Anand, India
Bachelor in Technology in Information Technology — July 2022

Skills

Programming Languages: Python, JavaScript,C,C++, SQL
Software Development: Object-Oriented Design, Data Structures and Algorithms
Frameworks: Django, Flask, Bootstrap
Databases: MySQL, SQLite
API Development: Django REST Framework, Postman
Operating System: Linux, macOS, Windows
Tools: Git, CI/CD Pipelines, Kubernetes, Docker
Data Analysis: Pandas, NumPy, Matplotlib, Seaborn
Cloud Technologies:AWS, Microsoft Azure, Google Cloud

Experience

Graduate Research Assistant, California State University Long Beach, Long Beach , USA — 07/2023 – present
- Applying **machine-learning techniques** and **causal inference** to tackle **CWE vulnerabilities**, amplifying hardware, and software security. Investigating cause and effect dynamics to bolster overall system protection and Vulnerability detection.
- Designing **data-centric strategies** to strengthen hardware and software frameworks, preemptively countering potential threats. Aiming for proactive, robust defense mechanisms to ensure system integrity and resilience.

Research Intern, Physical Research laboratory(PRL), Ahmedabad , India — 05/2022 – 11/2022
- Employed **data mining**, **image processing**, and **CNN-based U-net architecture** to detect water and ice particles within lunar permanently shadowed regions (PSRs). Achieved advanced insights into lunar composition using **Data engineering**.
- Surveyed diverse PSRs using **image enhancement techniques**, contrasting prediction strength against the HORUS baseline model. Validated algorithm effectiveness and improved the detection accuracy from **76% to 84%.**

Research Intern, Indian Space Research Organisation(ISRO), Ahmedabad , India — 04/2021 – 09/2021
- Orchestrated VPS application employing **Image Processing, machine learning, CBIR, SIFT, and vocabulary tree**.Mapped data key points onto visuals for precise positioning, enhancing user navigation quality.
- Developed efficient algorithm using brute force matching, drastically reducing query time to **0.3s from 1.7s** using nonlinear optimization techniques. Elevated image ranking precision, ensuring swift and precise query results.

Software Developer Intern, Firecamp.io, Surat , India — 04/2020 - 09/2020
- Utilized backend aid for **REST API** and **web socket** package. Created Firecamp's Predefined **GraphQL** queries for dataset generation, training their **recommendation tool** on the multi-tiered systems.
- Conducted Automated API and **JSON payload tests** for **HTTP**, **web socket**, and **socket.io** requests. Formulated auto **JSON schemas** for uniform format.

Projects

Artsy Store(E-Commerce Website) — 2022
- Developed a fully functional e-commerce website for my captured photographs using the **Django framework**, enabling customers to purchase prints.Integrated the **Stripe** payment method to facilitate secure and seamless online transactions
- Designed responsive frontend with **Bootstrap** for user-friendly interface. Leveraged **Django's ORM** for seamless DB interaction, enhancing storage, retrieval. Utilized **SQL** database for structured data, optimizing website performance.

ResRank(A Resume Ranker) — 2022
- Engineered **Flask**-powered resume ranker, fusing **ML algorithms** for swift evaluation. Leveraged **NER, text classification, and NLP** for efficient candidate screening, expediting the recruitment process, and talent acquisition.
- Employed **random forests, gradient boosting, and NLP** for resume parsing. Leveraged **cloud services (AWS)** for scalability. Utilized **relational database MySQL**to manage structured data efficiently.

Publications

Facial Emotion Recognition using Convolution Neural Network, (ICICCS), 2021 — [Pdf] [Journal]
- Researched **facial emotion recognition** via **Convolutional Neural Networks**. Compared CNN and **Transfer Learning** methods, demonstrating enhanced accuracy.

Employee Attrition System using tree based ensemble techniques, (ICCCI), 2022 — [Pdf] [Journal]
- Developed an advanced employee churn prediction model by trying various **supervised ML models** along with **stacking, ensembling, and feature engineering** achieved an **accuracy (95.05%)**- higher accuracy than the currently existing models using **GradientBoost classifier and 85.37% through Random forest.**