Shrey Modi

modishrey007@gmail.com

(562) 486-9798
LinkedIn: Shreymodi

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)	Gujarat, 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, Node.js
Databases: MySQL, SQLite, PostgreSQL

API Development: Django REST Framework, Postman, SOAP
Operating System: Linux/Unix, macOS, Windows
Tools: Git, CI/CD Pipelines, Kubernetes, Docker
Data Analysis: Pandas, NumPy, Matplotlib, Seaborn
Cloud Technologies: AWS, Microsoft Azure, Google Cloud

Experience

California State University Long Beach, **Graduate Research Assistant**, Long Beach , USA   07/2023 – present
- Designed and Implemented a **unique GNN-Transformer model** to enhance **vulnerability detection** and prioritization, resulting in a **20% reduction in false positives** compared to previous state of the art techniques.
- Designing **data-centric strategies** to strengthen hardware and software frameworks, preemptively countering potential threats and increasing accuracy from **78 %** to **90 %** which makes it an **innovative solution** to **100+ problems.**

Physical Research Laboratory(PRL), **Research Intern**, Ahmedabad , India   05/2022 – 11/2022
- **Indian Lunar Mission**: Leveraged **advanced data mining techniques** to preprocess and analyze a **large-scale lunar dataset** exceeding **500GB in size**, achieving a **25% reduction in data preprocessing** time through optimization.
- Designed and implemented a **custom image processing pipeline**, resulting in a **15% increase in image quality** and a **10% reduction in noise**. Validated algorithm and improved the accuracy from **76% to 84%** along with **performance testing**.

Indian Space Research Organisation(ISRO), **Research Intern**, Ahmedabad , India   04/2021 – 09/2021
- **Visual Positioning Sytem:** Orchestrated VPS application employing **Image Processing, machine learning (ML)**, resulting in a **37% reduction in processing time** compared to the previous system. Conducted comprehensive **functionality tests** that led to a remarkable **40% increase in product scalability** after **algorithm integration** to the system.
- Developed efficient algorithm using brute force matching, reducing query time to **0.3s from 1.7s** using nonlinear optimization.

Firecamp.io, **Software Developer Intern**, Surat , India   04/2020 - 09/2020
- Utilized backend aid for **REST API** and **web socket** package. Implemented predefined **GraphQL queries** for dataset generation improving the **data quality by 30%**, while also optimizing the workflow through a **CI/CD pipeline** and containerization with **Kubernetes** to enhance **scalability and deployment efficiency** by **28%**.
- Conducted Automated API and **JSON payload tests** for **HTTP**, **web socket**, and **Socket.IO** requests. Created auto **JSON schemas** to ensure a consistent format, executed rigorous **unit testing**, achieving a **98% test pass rate.**

Projects – GitHub: shrey1608

Artsy Store (E-Commerce Website)   03/2022 - 08/2022
- Lead the project by developing a fully functional e-commerce website for captured photographs using the **Django framework**, enabling customers to purchase prints.Integrated the **Stripe** payment method which attracted **10000** 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 by 30%**.

ResRank (A Resume Ranker)   05/2021 - 11/2021
- Engineered **Flask**-powered resume ranker, fusing **ML algorithms** for swift evaluation. Leveraged **NER, text classification, and NLP** for efficient screening, **accelerating the hiring process**, validated through **trials with multiple startups.**
- Utilized a combination of random forests techniques to enhance **resume parsing efficiency by 43% improvement**. Leveraged **cloud services (Azure)** for scalability. Utilized **relational database MySQL** to **manage structured data efficiently**.

Publications – Google Scholar (Citations: 92)

Employee Attrition System using tree based ensemble techniques, (ICCCI), 2022   [Pdf] [Journal]
- Developed an **advanced employee churn prediction model** demonstrating my problem-solving skills and 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.**

Entrepreneurial Initiative

Coaching Platform – CSULB Apostle Incubator   2023
- Currently spearheading the **development of a coaching platform** aimed at addressing the existing market gap in **health space**. Initiating the **software product's development**, including **project scoping**, and **requirement gathering**.
- Currently **Leading** and **collaborating** with a **cross-functional team** of 8 members to oversee the **software product's development** while strategically **integrating artificial intelligence** components through business-driven decisions. Achieved a **23% reduction in development time** by implementing efficient **project management techniques**.