Megha Patel

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SKILLS

- **Web Technologies:** HTML5, CSS3, JavaScript, TypeScript, PHP, jQuery, ES6, JSON
- **Programming Languages**: C++, Python, Java, R
- **Frameworks and Libraries:** React.js, Redux, Node.js, Express.js, Bootstrap, RESTful APIs, Tailwind, WordPress
- **Developer Tools**: GitHub, NPM, Postman, MS Excel, R studio, VS code , Jupyter Notebook
- **Database**: MySQL, MongoDB, SQLite, Firebase

EDUCATION

Master of Science in Computer Science (MSCS) | GPA: 3.9 **May 2024**

University of the Pacific (UOP)

Coursework*: Web Development, Advance Software Engineering,UI-UX Design, Data Science, Data Analytics, Database Management System, Machine Learning in Cybersecurity, Techniques in Research*

Bachelor of Engineering in Computer Engineer | GPA 3.94 **May 2022**

Gujarat Technological University (GTU)

Coursework*: Operating System, Data Structure, Analysis of Algorithm, Artificial Intelligence, SQL, Computer Networking*

EXPERIENCE

Graduate Research Intern | *Center for Business and Policy Research* **Oct 2023 – Present**

- Created, maintained and led websites for San Joaquin County's Community Pulse page and San Joaquin LAFCO using **WordPress**, ensuring user-friendly navigation and functionality.
- Consolidated and updated data from diverse government sources; presented actionable insights through clear and engaging tables and graphs in **Excel** and **Tableau**. Highlighted trends and patterns for San Joaquin County's population, economy, environment, and its 7 cities.
- Achieved a significant **20%** increase in website views and views per session, enhancing community engagement with data.

Web developer Intern | *Brainy beam Pvt. Ltd.* **Jan 2022 – May 2022**

- Developed a time-phased prediction system for distributor stock management called 'Sales Forecast' using **Django** (Python), enabling users to predict future sales trends based on historical data, optimizing inventory levels and reducing stock outs by **15%**.
- Leveraged a technology stack including HTML5, CSS 3, Bootstrap for a user-friendly and responsive front-end, and used **SQLite** for efficient data storage and retrieval.
- Streamlined user experience by **20%** through implementation of data visualization tools with charts.js, providing interactive charts and graphs for clear forecast results and insights.

Full Stack Developer Intern | *CreArt Solution* **May 2021 – June 2021**

- Crafted a rich user experience (**UX**) for an ethnic wear e-commerce platform by crafting interactive front-end features using HTML, CSS, **JavaScript**, **Laravel (PHP)**, and **MySQL**.
- Utilized responsive design principles and **SEO** best practices to optimize web content for various devices, screen sizes, keywords, meta tags, and site speed, enhancing the website's visibility and search engine performance by **10%**.
- Conducted rigorous **testing** and **debugging** of front-end features to ensure seamless integration with the back-end.

PROJECTS

Finance Dashboard **May 2024 - June 2024**

- Engineered a comprehensive Personal Finance Dashboard utilizing React, Node.js/Express, Chart.js and MongoDB, allowing users to track expenses and incomes with real-time data visualization and dynamic charts.
- Enhanced user experience by integrating **search**, **sorting**, **validation**, and **CRUD** operations for transactions, while ensuring secure and efficient data management through **RESTful API** endpoints.

Resource Constraints Intrusion Detection Framework for VANET **Jan 2024 - May 2024**

- Proposed a **novel**, lightweight Machine Learning (ML) framework for intrusion detection in Vehicular Ad-Hoc Networks (**VANETs**). Incorporated Principal Component Analysis (**PCA**) for dimensionality reduction, minimizing operational footprint and enabling efficient deployment of ML-based intrusion detectors, significantly enhances VANET security.
- Optimized the proposed lightweight ML framework for VANET intrusion detection using PCA (**K=3**) for dimensionality reduction, achieving high detection performance and minimizing resource consumption, significantly enhancing VANET security.

Academic Advantages: A Student Support Application **Mar 2023 – May 2023**

- Developed a React application to facilitate 24/7 student access to Teaching Assistant (TA) information stored in the university's Student Support Center database. Implemented features for easy location of TA availability and contact details, enhancing accessibility to academic support resources.
- Designed and implemented **RESTful** web services using **Node.js** to seamlessly integrate the **React.js** frontend with the **MongoDB** database, ensuring efficient data retrieval and real-time updates for optimal user experience.

Predicting H1b Visa Approval **Feb 2023 – May 2023**

- Innovated a predictive model using multiple machine learning algorithms (**logistic regression, decision tree, naive Bayes, SVM,** and **random forest**) to forecast H1B visa application outcomes, achieving an **87%** accuracy rate on a validation set of **10,000** applications.
- Leveraged a complex dataset containing applicant demographics, job details, and employer characteristics to enhance understanding and provide insights into the H1B visa application process for employers and foreign workers.

Toy Rental **Dec 2018 – May 2019**

- Build an **ecommerce** website called Toy Rental using **PHP**, **MySQL**, and HTML/CSS, offering customers the option to rent or buy individual toys or packages of toys.
- Engineered and integrated an online payment gateway connected to Google Pay, resulting in successful payment transactions for **90%** of test transactions during QA testing.

CERTIFICATES & ACHIEVEMENTS

- Data Science in R – Harvard University & Data Analytics in R - Google
- Front-End development - Coursera Certification – Meta
- Participated in SciTech fest in GNU for project presentation and got 2nd rank.
- Submitted the research paper on Intrusion Detection for VANETs to the IEEE - AIC 2024 conference.