VRAJ PAREKH

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Website: vraj24.github.io/portfolio/

EDUCATION:

Indiana University, Bloomington, IN, United States   **Expected May 2026**
Master of Science, Computer Science   CGPA: 3.7/4.0
Relevant Coursework: Software Engineering, Applied Algorithms, Machine Learning, Computer Vision, Cloud Computing

G. H. Patel College of Engineering & Technology (GCET), Anand, India   **Apr 2024**
Bachelor of Engineering, Computer Engineering   CGPA: 8.86/10.00

TECHNICAL SKILLS:

- **Languages:** C, C++, Java, Python, Dart
- **Web Development:** ReactJS, NodeJS, HTML5, CSS, JavaScript, TypeScript
- **Libraries & Frameworks:** Flutter, Redux, PHP, Scikit-Learn, Keras, TensorFlow, PyTorch, OpenCV
- **Databases:** MongoDB, SQL
- **Tools & Platforms:** Git, VS Code, Anaconda, PyCharm, Xcode, Docker, AWS (EC2, S3, Lambda, SageMaker, SNS)
- **Other:** REST APIs, Agile Methodologies, Authentication Protocols, Database Design, CI/CD

WORK EXPERIENCE:

Tech Elecon Pvt. Ltd., Anand, India   **Dec 2023 – Apr 2024**
Software Engineer Intern
- Designed a scalable e-commerce platform using ReactJS, NodeJS, and MongoDB, improving load handling by 40%.
- Enhanced system performance by optimizing Redux-based state management, reducing latency by 30%.
- Integrated PayPal API for secure payment processing, achieving 99.9% uptime.
- Led requirement gathering, prototyping, and deployment with a cross-functional team, ensuring on-time delivery.

PROJECTS:

Cloud-Based Weather Forecasting with LSTM   **Feb 2025 – Apr 2025**
Technologies: AWS, Python, Pandas, LSTM, Kinesis, Lambda, SageMaker
- Designed and deployed a real-time ML pipeline using AWS to forecast weather patterns via Sagemaker-hosted LSTM models.
- Streamlined ingestion from NOAA using AWS Kinesis and implemented Lambda triggers for data preprocessing.
- Created an automated severe weather alert system using AWS SNS, improving regional forecasting response times.

PrismCart – Cross-Platform E-Commerce System   **May 2024 – Oct 2024**
Technologies: React, NodeJS, MongoDB, Flutter, Dart
- Built a unified shopping platform with both web and mobile applications using Flutter and React.
- Secured authentication with JWT tokenization, improving login/session reliability by 95%.
- Developed modular REST APIs to manage inventory, enabling real-time product updates by admins.
- Added item-based and price-aware recommendation engine to boost user engagement by 15%.
- Integrated PayPal, Apple Pay, and Google Pay for secure and convenient payment processing, including automated receipt generation.

Emotion Based Music Recommendation   **Jun 2023 – Oct 2023**
Technologies: Python, Keras, TensorFlow, CNN
- Built real-time emotion recognition system, achieving an accuracy of 64% with simple CNN layers, which increased to 77% by using MobileNet.
- Integrated Spotipy API to recommend music matching emotional states in real-time stress relief applications.