**DEV PARIKH**

**667-433-9710 | dparikh3@umbc.edu | linkedin.com/in/devparikh0506 | github.com/devparikh0506 | devparikh0506.github.io EDUCATION**

**Master of Science Data Science Jan 2024 – Dec 2025** University of Maryland Baltimore County, *Maryland,* USA **GPA: 3.83 / 4.00** *Coursework: Machine Learning, Data Analysis, Data Engineering, Deep Learning, Natural Language Processing*

**Bachelor of Engineering in Computer Engineering Jun 2019 – May 2023** Gujarat Technological University, Gujarat, India **CGPA: 8.11/10.00** *Coursework: Data structures and Algorithms, Database Systems, Object Oriented Programming, Web Development*

**SKILLS**

**Programming Languages:** Python, JavaScript, HTML, SQL, C++, C.

**Machine Learning & AI:** Deep Learning (Pandas, NumPy, Scikit-learn, PyTorch, TensorFlow), NLP (Transformers, NLTK, TextBlob), Computer Vision (OpenCV), Supervised Learning Models (Regression, Classification, Clustering).

**Frameworks & Libraries:** Django, Flask, Node.js, React, Next.js, Gatsby.js, PySpark, Hadoop, AWS Glue, Jest. **Big Data & Cloud Computing:** AWS (S3, EC2, Lambda, DynamoDB, Glue, RDS, CloudWatch), SQL and NoSQL Databases (MySQ, PostgreSQL, MongoDB, Firebase), Data Warehousing, ETL (PySpark, Hadoop, SSIS), Power BI, Tableau.

**Deployment & DevOps:** Version Control (Git, GitHub, GitLab, Bitbucket, SourceTree), Deployment (AWS, Docker, Digital Ocean), Jira, Postman. **WORK EXPERIENCE**

**NSF BRAIN Center**, *Maryland, USA*

***Deep Learning Researcher - Brain Computer Interface (BCI)* Oct 2024 - Present** • Architected a **Vision Transformer (ViT) pipeline** integrating **8-channel** EEG signals (**512Hz** sampling) with Kinova Gen3 robotic arm control, achieving **95%** grasp success rate in real-time BCI applications.

• Built a **Deep Recurrent Neural Network** (**D-RNN**) for EEG-based lie detection by analyzing P300 event-related potentials, achieving **88%** classification accuracy and outperforming traditional SVM methods in mock interrogation scenarios.

• Collaborated on a peer-reviewed publication in **IEEE Access (2025),** presenting novel approaches for multimodal emotion recognition using EEG and facial features.

**Codage Habitation**, *Gujarat, India*

***Junior Machine Learning Engineer* Sept 2023 - Jan 2024** • Engineered machine learning pipelines for customer segmentation using **K-means clustering** and **bi-directional LSTM** networks, improving sentiment prediction accuracy by **15%.**

• Optimized a video processing pipeline using **OpenCV** and deployed components via AWS Lambda for scalability, reducing frame processing time by **20%**. • Automated data preprocessing workflows, reducing manual effort by **25%**.

***Software Engineer* Nov 2021 - Aug 2023** • Created **50+** real-time dashboards with **React and Django,** increasing test coverage from **60%** to **90%** using **Jest,** reducing production bugs by **30%.** • Constructed a **CLI tool** to auto-generate code for **React** and **Node.js**, **saving 500+ engineering hours** annually and standardizing code quality across teams. • Built a CI/CD pipeline to automate website deployment on **Digital Ocean** using **GitHub Actions**, streamlining the deployment process and ensuring consistent updates across environments.

• Implemented scalable file handling in dashboards with AWS S3 multipart uploads, optimizing **10GB+** transfers and cutting monthly overhead by **50+** hours. • Architected a reusable component toolkit with **50+ options** that reduced developer involvement by **90%,** saving **400+ hours** annually. • Programmed a **Node Package Manager (NPM) plugin** to automatically identify and populate essential search engine optimization (**SEO**) features on the website, reducing the annual workload of developers by **300+ hours**.

• Engineered an employee activity monitoring system with **Python** and **React**; leveraged **JWT authentication** to enhance security and reduced time theft by **40%**. **Frontend Army**, *Gujarat, India*

***Software Engineer Intern* Aug 2021 - Oct 2021** • Designed **10+** admin dashboards using **React** and **Node.js**, enhancing fast content management and reducing website development time by **40%.** • Developed a **marketing website** with **GatsbyJS** for **frontend development**, structuring a **backend service** using **SanityIO**, and integrated it using **Groq queries** for **live content changes** with admin access, **decreasing content management time by 25%.**

• Constructed a scalable **E-Learning platform** using **Next.js**, facilitating performance tracking for **10,000+ students** and visualizing real-time progress data. **PROJECT EXPERIENCE**

**Soccer Player Valuation Model (Github)** – *Machine Learning* | *Python, Pandas, Scikit-learn, Ensemble Modeling, Feedforward Neural Network* • Developed a machine learning **model** using Python and ensemble methods to predict soccer player transfer values, decreasing forecast error by **37.4%** as measured by R-squared improvement.

• Architected a **Feedforward Neural Network (FNN)** in Python, optimizing via **stochastic gradient descent (SGD)** and **attaining 99.95% accuracy**, integrating **Scikit-learn** for scaling, imputation, and encoding to enhance data preprocessing and **reduce model training time by 15%.**

**Unmanned Aircraft System Risk Analysis (Github)** – *Big Data & Cloud Computing* | *Python, PySpark, Hadoop, AWS glue, Big Data Analysis* • **Collaborated in a team** to analyze **100+ GB** of **historical flight track points** from **OpenSky Network** and **Unmanned Aircraft System (UAS) sightings from Federal Aviation Administration (FAA)**, employing **PySpark** and **AWS Glue** to identify key risk factors with **95% accuracy.** • Generated a comprehensive **risk analysis**, highlighting high-risk zones via **shapefiles** and utilizing big data frameworks (**Hadoop** and **PySpark**) for efficient data processing, providing actionable insights with a **90% confidence level**, contributing to aviation safety.

**PUBLICATIONS**

**F. Safavi, V. R. Venkannagari, D. Parikh, and R. K. Vinjamuri, "Deep Fusion of Neurophysiological and Facial Features for Enhanced Emotion Detection," in IEEE Access, 2025. (Accepted for publication) DOI: 10.1109/ACCESS.2025.3555934** • Developed a multimodal transformer-based architecture integrating EEG and facial data, achieving near state-of-the-art emotion recognition accuracy. • Research supported by NSF CAREER Award HCC-2053498; focused on advancing human-computer interaction through affective computing.