Dev Parikh

Baltimore, MD (Open to relocation)

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# PROFESSIONAL SUMMARY

**Software Engineer** with **4+ years** of experience delivering scalable **machine learning systems**, **AI-driven automation**, and **cloud-native applications**. Proven success developing **Anthropic LLM-powered autonomous systems** and **GenAI tools** on **AWS Bedrock**, reducing manual effort by up to 40%. Skilled in full-stack development with **React, Next.js**, and **Node.js**, coupled with expertise in **PyTorch, Spark,** and **MLOps** platforms including **SageMaker** and **MLflow**. Experienced in building **CI/CD pipelines** using **AWS Lambda** and **Docker** to accelerate deployments by 50%. Strong foundation in AI integration with robotics through advanced deep learning research, achieving production-ready ML systems with high accuracy.

# CORE COMPETENCIES

**Languages & Frameworks:** Python, TypeScript/JavaScript, React, Next.js, Redux, Bash/Shell

**Artificial Intelligence & ML:** GenAI (LLMs, RAG, LangChain, Prompt Engineering), Deep Learning (CNN, RNN, LSTM, PyTorch), Reinforcement Learning (DQN), Signal Processing, Time-Series Analysis, Hyperparameter Tuning

**Backend & APIs:** Node.js, Django, REST APIs, GraphQL, Microservices

**Data & Distributed Systems:** Apache Spark, Kafka, PySpark, Hadoop, PostgreSQL, MySQL, MongoDB, Firebase, Power BI, SSRS

**Robotics & Computer Vision:** Unitree G1 Humanoid Robot, Kinova Gen3 Arm, Isaac Sim, ROS, OpenCV, YOLOv8

**MLOps & Cloud:** AWS (SageMaker, Bedrock, EC2, Lambda, S3), MLflow, Docker, Jenkins, GitHub Actions, CI/CD

**Collaboration & Tools:** Git, Terraform, Jira, Agile, Scrum

# WORK EXPERIENCE

**Machine Learning Software Engineer** AUG 2025 - PRESENT

[VITG Corp](https://www.vitg.us/), *Baltimore, MD*

* Developed an **Anthropic Claude LLM-based autonomous system** through **AWS Bedrock** to perform multi-step reasoning on pull requests, integrating outputs from Checkov and Semgrep to identify configuration and permission risks.
* Gained experience with **AWS Lambda, API Gateway,** **Terraform** and **VPC** to enable **event-driven ML validation pipelines** that reduce manual code review effort and strengthen compliance across deployments.

**Sr. Machine Learning Software Engineer** NOV 2021 - JAN 2024

[Codage Habitation](https://codagehabitation.com/), *Ahmedabad, India*

* Led development of **10+ Anthropic LLM-powered Retrieval-Augmented Generation (RAG) chatbots**, automating user query resolution with zero human intervention and improving content accessibility by 35%.
* Spearheaded creation of **GenAI-driven automation tools** leveraging **LangChain** and **Anthropic/OpenAI** models on **AWS Bedrock**, streamlining content generation workflows and cutting manual effort by 40%.
* Solely managed **10+ CI/CD pipelines** using **AWS, Docker,** and **GitHub Actions** that accelerated deployment frequency by 50%.
* Architected and launched **20+ real-time dashboards** using **React, Node.js, Chart.js**, and **ApexCharts**, increasing cross-departmental KPI visibility and data-driven decision making.
* Designed backend architecture for **50+ microservices** with **optimized database indexing** in **PostgreSQL**, halving query latency and improving system responsiveness.
* Delivered **10+ high-performance web applications** with **Next.js SSR/SSG**, boosting page load speeds by 40% and enhancing user experience.
* Led a team of **5+ engineers** to design and deploy the **GenAI-Powered Customer Support Agent** using **Claude sonnet 3.0**, **LangChain**, and **AWS Bedrock**, improving customer support efficiency by 35%.

**Machine Learning & Robotics Graduate Researcher** OCT 2024 - PRESENT

[UMBC (Vinjamuri Lab),](https://vinjamurilab.cs.umbc.edu/) *Baltimore, MD*

* Improving deep learning models in **PyTorch (CUDA)** for EEG-based motor imagery classification and exposing trained models as **modular REST APIs** to support robotics integration and real-time inference.
* Building scalable **simulation and data pipelines** in Isaac Sim with OpenCV-based vision modules, ensuring robust backend workflows for multimodal ML experiments.
* Engineered and published a **multimodal ML system (EEG + facial features)** that achieved 98% accuracy, demonstrating applied ML research translated into **production-ready AI services** (published in IEEE Access, 2024).

# EDUCATION

**Master of Science, Data Science**  JAN 2024 - DEC 2025  
University of Maryland Baltimore County, MD, USA GPA: 3.75

**Bachelor of Engineering, Computer Engineering** JUN 2019 - MAY 2023  
Gujarat Technological University, Gujarat, India GPA: 3.5

# KEY PROJECTS

**GenAI-Powered Customer Support Agent @ Codage Habitation***Anthropic Claude sonnet 3.0, LangChain, RAG, AWS Bedrock, Python, React, Next.js*

* Led a team of 5+ engineers to design and deploy a retrieval-augmented generation (RAG) chatbot using Anthropic Claude sonnet 3.0, LangChain, Next.js and AWS Bedrock.
* Improved customer support efficiency by reducing average response time by 35% and increasing first-contact resolution rate by 25%, driving higher customer satisfaction.

**BibleProject Platform Backend @ Codage Habitation (**[**Visit**](https://bibleproject.com/)**)***Django, Next.js, Microservices, Docker, PostgreSQL, AWS S3*

* Built a scalable backend using Django and Next.js with microservices architecture and secure media handling via AWS S3.
* Containerized services with Docker and automated deployments through CI/CD pipelines, improving release reliability and speed.

**EEG Emotion Detection (**[**GitHub**](https://github.com/devparikh0506/EEG_Emotion_Detection?tab=readme-ov-file#emotion-detection-using-deap-dataset)**)***Python, PyTorch, CNN, RNN, Deep-RNN, EEG (DEAP Dataset)*

* Built an AI model using deep learning (Deep-RNN) to detect human emotions such as high/low valence and arousal from physiological signals in the DEAP dataset, achieving ~62% accuracy.
* Applied data preprocessing, augmentation, and neural networks to improve recognition performance, enabling applications in human–computer interaction and affective computing.

# PUBLICATIONS

**Safavi F., Parikh** **D.** et al. (2024), "Deep Fusion of Neurophysiological and Facial Features for Enhanced Emotion Detection," IEEE Access, vol. 13, pp. 67434–67445, 2025, [DOI: 10.1109/ACCESS.2025.3555934](https://doi.org/10.1109/ACCESS.2025.3555934).

# ACHIEVEMENTS

* Achieved **Software Engineer** certification from Hacker Rank. ([View Credentials](https://www.hackerrank.com/certificates/iframe/e20d4dce5f87))
* Earned **AWS Educate Machine Learning Foundations** Certificate, demonstrating cloud-based ML proficiency.