# Deepesh Devang Parpani *(he/him)*

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## Education

**University of Massachussets Amherst** Sep 2025 – Expected May 2027
*Master of Science in Computer Science*
- Coursework: Machine Learning, Advanced Algorithms, Distributed Systems and Computing

**Vellore Insitute of Technology, Vellore** Aug 2020 – May 2024
*Bachelor of Technology in Computer Science and Engineering* *GPA: 3.5*

## Experience

**Software Engineer** | ***Internship + Fulltime*** Feb 2024 – July 2025
*Verizon* *Hyderabad, India*
- Migrated and developed workflows in ServiceNow within 10 weeks, improving user experience and efficiency by over 40%. Built custom React and Angular widgets for Ticketing and Change Management workspaces, adding alerts and notifications to enhance scalability. Led modernization of legacy ticketing systems through POCs and automation initiatives.
- Transformed the in-house Change Management app with Redis-backed APIs on Spring Boot and developed smart-scheduling APIs for conflict-free Change and Multiday Requests. Built React + Redux interfaces and workflows for the new Multiday feature, and optimized APIs for conflict detection, request handling, third-party integration, and fault tolerance.

**Software Engineer Intern** May 2023 – July 2023
*Volkswagen ITS* *Pune, India*
- Spearheaded integration of third-party security APIs within the application gateway to enable encrypted file uploads, reducing data exposure incidents by around 55% and improving system resilience and compliance metrics by around 35% through secure token validation and access-layer hardening.

## Projects

**Planetary Defense System** | *Python, XGBoost, FastAPI, GCP, Docker, GitHub Actions* Dec 2025
- Engineered a physics-informed MLOps pipeline using cost-sensitive XGBoost and SMOTE to identify hazardous NEOs via NASA's API, integrating features like Kinetic Proxies ($v^2 \times m$) to achieve a 99.2% recall rate.
- Architected a cloud-native microservices system using FastAPI, Streamlit, and Docker, automated via GitHub Actions for end-to-end weekly model retraining and GitOps deployment to Google Cloud Run.

**Autonomous Medical Triage** | *Python, MLX, Transformers, Streamlit, Watchdog* Jan 2025
- Architected a local-first multi-agent system on MLX for 4 medical domains, utilizing a VLM-based routing engine to autonomously dispatch heterogeneous patient data with strict privacy on edge hardware.
- Engineered "System 2" reflective workflows to reduce hallucinations by 40% and implemented an RLHF loop to auto-curate a Golden Dataset from real-time clinician feedback.

**SPARCS** | *PRISM Research Internship Project for Samsung R&D Institute India* December 2022 – July 2023
- Implemented a Seq2Seq model with BERT outputs for joint intent detection and slot filling, achieving 79% accuracy on mixSNIPS, outperforming STACK-Ensemble and STACK-BERT.
- Resolved code-mixed semantic issues using contextual analysis, manual annotation, and dictionary-based overlap handling.

**goingDutch** | *React, Flutter, Node.js* Sep 2022 – Nov 2022
- Built a React and Flutter application for shared expense management using a greedy-based algorithm inspired by Splitwise, with an added impersonation feature that allows expense sharing without requiring group member logins.
- Achieved optimization in cases with minimal lenders and many borrowers, where the 'simplify debts' approach is efficient but not fully optimal.

## Technical Skills

**Languages**: Java, Python, C/C++, SQL (Postgres, MySQL), MongoDB, JavaScript, HTML/CSS, R, PHP, Dart
**Frameworks**: React, Node.js, Angular, Next.js, Flask, Spring Boot, FastAPI, Streamlit, Flutter, React-Native
**Developer Tools and Libraries**: Git, Docker, GCP, GitHub Actions, AWS, Azure, Kubernetes, XGBoost, Scikit-learn, Pandas, NumPy, Matplotlib, Keras, HuggingFace, PyTorch, TensorFlow, ServiceNow