

PRAJAY PANANGADAN

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EDUCATION

University Of Florida

Master of Science in Computer Science

- Coursework: Advanced Data Structures, Natural Language Processing, Machine Learning

Aug 2024 - May 2026

GPA: 3.7—Florida, USA

Manipal University Jaipur

Bachelor of Technology in Computer Science & Engineering

- Coursework: Data Structures And Algorithms, Relational Database Management Systems, Object Oriented Programming

July 2018 - May 2022

GPA: 3.8 — Rajasthan, India

EXPERIENCE

University of Florida - College of Medicine

Healthcare AI/NLP Intern

- Implemented **graph-based anomaly detection** algorithms for Heart-Failure patient health records, optimizing care pathways and reducing diagnostic time by 30%.
- Improved healthcare feedback analysis by implementing **sentiment analysis** with **NLP** and **BERTopic** models, identifying critical trends across 5,000+ patient reviews.
- Developed an interactive **Angular** dashboard with **Material UI** to visualize patient satisfaction metrics, enabling real-time decision making for healthcare administrators.

Florida, USA

Jan 2025 – Present

Dell Technologies

Software Engineer 2

- Engineered a **Digital Inventory EOQ Projection** solution with dynamic visualizations that reduced manual forecasting by 20% and increased stakeholder engagement by 40%.
- Led transition from monolithic to **Micro Frontend architecture**, implementing reusable **Angular** components from Figma designs that improved platform scalability and reduced development cycles by 35%.
- Streamlined feature delivery by 70% through migration from **Springboot REST APIs** to **FastAPI**, enabling rapid deployment of critical business functionalities.

Bengaluru, India

Feb 2024 – Aug 2024

Software Engineer 1

- Enhanced **Service Anomaly Detection** accuracy from 83% to 95% by implementing **NLP** with **multiclass classification** and building an ensemble model combining Random Forest and MLP with confidence intervals.
- Significantly improved model training speed by 81% (90 to 17 minutes) by migrating the TAM Allocation Project to Dell's **Cloud GPU environment** with parallel processing capabilities.

Aug 2022 – Jan 2024

Software Engineer Intern

- Optimized **Dell Sales Application** development by 55% through designing **responsive, mobile-first Angular components**, enabling successful migration from monolithic to **MFE** architecture.
- Engineered an accessibility solution for dyslexic users through the TechCSR Initiative by developing a **Gesture Detection Model** with **React** frontend and **FastAPI** backend, improving digital inclusion for users with learning disabilities.

Feb 2022 – May 2022

PROJECTS

Reinforcement Learning for Out-of-Domain Reasoning in SLMs — LLM, Reinforcement Learning, SLM

- Fine-tuned **Qwen2.5-1.5B-Instruct** on **GSM8k** mathematical dataset using **G3P0** reinforcement learning methodology for enhanced problem-solving capabilities.
- Demonstrated successful **out-of-domain transfer** to **FOLIO** reasoning dataset, achieving 30% improvement in reasoning performance compared to baseline model.

Gator Swamp - Full Stack Social Media Platform — React, Tailwind CSS, Go, MongoDB, Vercel, Railway

Project Link

- Developed a Reddit-inspired **social platform** with **real-time messaging** and user feeds using **React** and **Tailwind CSS**, implementing protected routing and Context API for state management, deployed on **Vercel** for seamless delivery.
- Implemented a high-performance backend supporting 1000+ concurrent users through **scalable** infrastructure built with **Golang**, **MongoDB**, and **JWT authentication**, deployed on **Railway** for cloud hosting.

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, TypeScript, Go

Web Development Frontend: Angular, Tailwind, React, CSS, HTML, Figma, UI/UX

Web Development Backend: FastAPI, MongoDB, SQL, Go, REST, Django

Data Science/Machine Learning: Python, Pytorch, Natural Language Processing (NLP), fast.ai, NumPy, Pandas, LLM

Collaboration: Git, JupyterLab, Agile