Jatan J. Pandya

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Email : jatanjay212@gmail.com
Portfolio : jatanjay.github.io
LinkedIn : linkedin.com/in/jatanjay

Education

University of Massachusetts - Amherst — Amherst, MA
Bachelors of Science in ***Computer Engineering*** *and* ***Computational Linguistics*** — *Sept. 2018 – Aug. 2023*

Vice President | UMass IEEE Student Chapter — *Sept. 2021 – May 2023*
Teaching Assistant | M5: ECE Makerspace — *Sept. 2019 – May 2021*

Skills

Languages: Python, C/C++, R
Full Stack: HTML, CSS, JavaScript, ReactJS, PostgreSQL, AWS
Data Science & Machine Learning: PyTorch, Numpy, OpenCV

Work Experience

QuireTech LLC — Cresskill, NJ
Software Engineer — *Sept. 2023 – Present*

- **Full Stack & Cloud Infrastructure:**
  - Architected and implemented an **AWS** infrastructure for uplink and downlink data exchange for over **30 LoRaWAN** devices across a 1-mile radius.
  - Developed a dashboard offering **real-time** access to critical statistics like device health, status, and GPS location.
- **IoT:**
  - Upgraded from an **RPi**-based system to **ESP32** within a tight **2-week** deadline, **cutting** per-unit **cost** by **93.33%** and enhancing the capabilities and portability of the unit.
  - Implemented a **web app** with file management capabilities, enabling direct uploads to streamline processes and enhance flexibility.
- **Client Engagement:**
  - Acquired **2 new clients** through proactive outreach efforts.
  - Proposed and implemented improvements, leading to heightened client satisfaction and retention.

Projects

Real Time Dashboard | *jatanjay.github.io/loradashboard* — *Jan. 2024 – March 2024*

- Developed a real-time dashboard to visualize device telemetry data, providing client with instant insights into device performance and status.
- Utilized AWS services including AWS IoT Core for device communication, DynamoDB for data storage, and Amplify for deployment of the application.

CardVerse | *jatanjay.github.io/CardVerse* — *Sept. 2022 – May 2023*

- Developed a **machine** capable of **authenticating**, **grading**, and **sorting 1000 Magic: The Gathering** cards, streamlining the card authentication and inventory pipeline.
- Designed a **machine learning** pipeline utilizing YOLOv8 to identify card defects with **97% accuracy**, effectively recognizing scratches, bends, and dents.
- Implemented an **image processing** pipeline achieving a **99% authentication accuracy** on industry-standard tests.
- Engineered a system leveraging Jetson and RPi, to integrate a 3 axis robotic **gantry** arm, multiple cameras, a weighing scale, and an LED chamber, enabling precise card handling and examination.

Awards and Accolades

Chancellor's Award — *$14,000* ***Annually***
UMass Business Plan Pitch 2022 | *CardVerse* — *$4,500* ***Second Place***
UMass Berthiaume Innovation Challenge 2023 | *CardVerse* — *$1,000* ***Top 5 Finalist***
UMass Entrepreneurship ULaunch 2022 | *CardVerse* — *$1,500* ***First Place***