

# Jatan J. Pandya

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New York, NY

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## 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*

**Resident Assistant** | UMass Residential Life

*Sept. 2021 – May 2023*

**Undergraduate 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*

- **Cloud Infrastructure:** Designed and deployed an AWS infrastructure to facilitate seamless uplink and downlink of data for over 30 LoRa node devices spanning a 1-mile radius.
- **Full Stack:** Developed an intuitive dashboard for said devices, providing real time access to key statistics such as device health, status and GPS location.
- **Embedded Systems:** Implemented a Flask based web application for a RPi-controlled motor apparatus to strength-test an experimental PPE equipment on a tight deadline of 2 weeks.
- **IoT:** Replaced Raspberry Pi-based simulator with ESP32, reducing per-unit cost by 93.33% while enhancing capabilities and retaining original functionality.  
Developed file management capabilities using local web application on ESP32, enabling direct file uploads, streamlining processes, and adding flexibility.
- **Client Engagement:** Acquired 2 new clients through proactive outreach efforts.  
Proposed and implemented improvements, leading to heightened client satisfaction and retention.  
Conducted client consultations to understand needs and suggest enhancements.

## PROJECTS

**Real Time Dashboard** | #TODO

*Jan. 2024 – March 2024*

- Designed and developed a real-time dashboard with ReactJS 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 and hosting of the application.

**CardVerse** | [jatanjay.github.io/CardVerse](https://jatanjay.github.io/CardVerse)

*Sept. 2022 – May 2023*

- Developed a multifunctional machine capable of authenticating, grading, and sorting <1000 Magic: The Gathering cards, streamlining the card management process.
- Designed a robust machine learning pipeline utilizing YOLOv8 to identify card defects with 97% accuracy, effectively recognizing scratches, bends, and dents.
- Implemented an image processing pipeline to authenticate cards on tests such as Rosette Pattern analysis, Green Dot detection achieving a 99% authentication accuracy.
- Engineered a sophisticated control system leveraging Jetson Nano and RPi, to integrate a robotic gantry system, multiple cameras, a weighing scale, and an imaging 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*