

# Jatan J. Pandya

(413) 362-6768  
New York, NY

Email : [jatanjay212@gmail.com](mailto:jatanjay212@gmail.com)  
Portfolio : [jatanjay.github.io](https://jatanjay.github.io)  
LinkedIn : [linkedin.com/in/jatanjay](https://linkedin.com/in/jatanjay)

## EDUCATION

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**University of Massachusetts - Amherst** Amherst, MA  
*Bachelors of Science in Computer Engineering and Computational Linguistics* *Sept. 2018 – Aug. 2023*  
*Recipient of Chancellor's Award* *\$14,000 Annually*

## SKILLS

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

## WORK EXPERIENCE

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

- **Full Stack & Cloud Infrastructure:**
  - Architected and implemented an **AWS** infrastructure for **uplink** and **downlink** data exchange for over **30 AWS Sidewalk** devices across a **1 mile** radius.
  - Developed a dashboard offering **real time** access to statistics like device health, status, and GPS location.
- **IoT:**
  - Upgraded from an **RPi**-based **medical** simulator to **ESP32** for 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 **3 new clients** through proactive outreach efforts.
  - Conducted **client meetings** and **drafted proposals** to their needs, enhancing satisfaction and retention.

## PROJECTS

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**Live Dashboard** | [jatanjay.github.io/loradashboard](https://jatanjay.github.io/loradashboard) *Jan. 2024 – March 2024*

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

**CardVerse** | [jatanjay.github.io/CardVerse](https://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.
- Won a total of **\$7000 prize money** at UMass's '22-'23 Berthiaume **Innovation Competiton**.

## LEADERSHIP EXPERIENCE

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