

# MARCO PAREDES

(619) 882-7626 | Dallas, TX | [marco.paredes2001@gmail.com](mailto:marco.paredes2001@gmail.com)  
[linkedin.com/in/ma-parede](https://www.linkedin.com/in/ma-parede) | [github.com/marcopared](https://github.com/marcopared) | [marcoparedes.vercel.app](https://marcoparedes.vercel.app)

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## RELEVANT SKILLS

Full-Stack Engineering, Data Engineering, Microservices, Azure Cloud Certifications, Distributive Systems, Product Engineering, Object-Oriented Design and Data Structures with Python

**Software Skills:** Python, Azure, REST, SQL, NoSQL, RDMS, Flask, Google Cloud, Firebase, JavaScript, React, Next.js, Node.js, Docker, Git, Pandas, NumPy, OpenCV, Matplotlib, Java, Linux/UNIX

## EXPERIENCE

**Software Engineer – Wells Fargo** | Dallas, TX | January 2024 – Present

- Led a team of 5 people to design, develop, and test a web application, including 5+ microservices, 3 database **SQL** table schemas, and 10+ **REST API** routes with **Python Flask**. Presented a department-wide demo with a working app
- Redesigned internal web application with **NoSQL** MongoDB to add more features including an automatic seamless check-in process. The web application was deployed and used within department and department events.
- Developed **Python** database analyzer scripts that identify database **SQL** clusters, linkings, and software health from 100+ JSON files and an external API, currently awaiting patent approval
- Documented and diagramed multiple **Java** and **Kafka** microservices, presented to a team of 10+ software engineers

**Software Engineering Intern – Qualcomm** | San Diego, CA | June 2022 – September 2022

- Demonstrated strong competency in **Python & SQL** via developing scripts to sync data between online API and **AWS RDS** of an end-to-end system, resulting in streamlined data flow of over 10k+ data points
- Collaborated with multiple teams to gather functional requirements, helping in the design of **SQL** schemas
- Extended internal tool by automating 100+ email reports from **AWS S3** database using **Python**, resulting in increased productivity by 200%
- Led initiative for product use case analysis and design in intern summer hackathon, placed 2nd out of 20+ teams

**Software Engineering Intern – Northrop Grumman** | San Diego, CA | June 2021 – September 2021

- Collaborated cross-functionally with clients via performing needs assessments to develop a freshwater data visualization web application featuring 1k+ data points
- Revamped GUI & backend, **JavaScript** WebGL GUI with Matplotlib data representation, optimized **Python-Pandas** backend for improved response
- Presented demos to key stakeholders to share product information and potential, leading to the project and team being highlighted in a company-wide report and a nomination for the 'Best Intern Project' award within the company

**Medical Device Research Assistant – Center For Memory & Recording Research** | UCSD | Sept 2019 – March 2020

- Researched design and rapid prototyping of an IoT ophthalmic device by testing the functionality of its electrical design with **C/C++**, work contributed was published in the peer-reviewed research journal *Microsystem Technologies*
- Designed automation script with **C/C++** to collect and classify 1k+ data points of the temperature of stepper motors, insights guided the decision-making of the type of stepper motor and reducing critical high temperature by 40%

## PROJECTS

**Verum.ai: Political Speech Analysis** ([verum.vercel.app](https://verum.vercel.app)) ([github.com/Akshat30/political-analyst](https://github.com/Akshat30/political-analyst)) | September 2023

**Hackathon Project, Skills:** Python, JavaScript, React, Next.js, AWS Gateway, AWS Lambda, DynamoDB, Microservices

- Won 2nd place in 600-member hackathon, led the development of an AI-driven political content analysis platform leveraging OpenAI's GPT-3.5 Turbo, including the deployment of a **React** web app and a microservice hosted on **AWS**
- Successfully integrated external APIs in **AWS Lambda** for text extraction and analysis, reduced served response time by 70% using **DynamoDB** to store the text extracted and its analysis, and ensured efficient handling of user requests

**YouTube Skeleton Clone** ([tinyurl.com/youtube-clone-mp](https://tinyurl.com/youtube-clone-mp)) ([github.com/marcopared/youtube-clone](https://github.com/marcopared/youtube-clone)) | August 2023

**Personal Project, Skills:** JavaScript, Node.js, Next.js, Google Cloud, Firebase, Cloud Pub/Sub

- Developed a simplified YouTube clone using **JavaScript** and **Google Cloud**, implemented **Cloud Pub/Sub** for asynchronous video processing and utilized **Google Cloud Storage** for efficient video storage and compression via ffmpeg, reducing video storage by 70% and accelerating video availability

**Raspberry Pi Dynamic Weather Station** ([github.com/marcopared/raspi-weather-station](https://github.com/marcopared/raspi-weather-station)) | March 2023

**Product Engineering Course Project, Skills:** Python, JavaScript, Plotly, REST API, SQL

- Developed a Raspberry Pi-based weather station with a **Python RESTful API** for real-time data collection on light levels, temperature, and humidity, improving data accuracy and resolution by over 50%
- Engineered a data pipeline using **Python** for an **SQL** database that was dynamically plotted in real-time using **JavaScript**, data visualization updates were achieved every 1 - 2 seconds, improving user interaction speed by 50%

## EDUCATION

**B.S. in Electrical Engineering, Machine Learning, University of California San Diego, June 2023**