**John Emmanuel S. Marco**

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**EXPERIENCE**

**SP Madrid & Associates PITX Parañaque City**

*Intern Software Developer QA Tester | Innovation Technology 10/2024 - 12/2024*

Python, Typescript, Node.js, React, Express, Socket-io, PostgreSQL, Hugging-Face, WebRTC, Postman

**Whisper** **WebGPU** (*Real-Time Transcription and Communication System for Agent Training role-playing*)

* Developed a real-time speech-to-text transcription system with Transformers.js, cutting trainee feedback cycle by 50%
* Built a WebRTC peer-to-peer audio solution, streamlining communication workflows and reducing response time in role-play simulations by 40%
* Integrated Whisper, WebRTC, and PostgreSQL into a secure pipeline, boosting transcription accuracy and usability in training simulations

**ALPR** (*Automatic License Plate Recognition*) - Frontend Development

* Coordinated with AI engineers to integrate and fine-tune machine learning models, ensuring accurate and efficient license plate recognition
* Engineered and deployed a responsive UI for the ALPR system, reducing plate detection time by 40% and increasing operator throughput by 30%
* Labeled, cleaned, and organized 5,000+ images for AI training, improving model accuracy by 15%

**Quality Assurance & Team Collaboration**

* Collaborated with developers and UI/UX designers to identify, track, and resolve **90%** of high-severity defects prior to production release
* Served as the sole QA tester for the company’s website, performing functional, usability, regression, and cross-browser testing to achieve 100% release readiness
* Wrote and updated QA documentation including test plans, test cases, defect logs, and validation reports, accelerating bug resolution speed by 35% in Agile development cycles

**Carpet Cleaning Doctor Fabric Remote**

*QA Tester | Frontend Developer 01/2023 - 07/2023*

HTML, CSS, JavaScript, jQuery, Bootstrap

* Resolved 100% of cross-device compatibility issues and tested on 3+ browsers and 15+ screen sizes, lowering defect rates by 35% and ensuring seamless UX
* Fixed critical mobile bugs (e.g., videos not playing, disappearing components) and optimized performance, raising mobile engagement by 25%
* Conducted manual and responsive design testing, eliminating 20+ defects, increasing stability, and improving UI consistency by 40%

**EDUCATION**

**Bachelor of Science in Computer Science Lucena City**

*AMA Computer College Lucena City 2021-2025*

**CS Thesis Project**

AMA Facial Recognition: Digital Record-logs Management System

Python, Node.js, Express.js, OpenCV, face-api.js, MediaPipe, PyQt5, JSON, XML, REST API, HTTPS, Git, **CORS**

* Led project planning and system architecture design for a CCTV-integrated facial recognition system, achieving 95%+ detection accuracy for automated student and staff attendance logging
* Directed backend development using Express.js and Node.js, implementing RESTful APIs for seamless communication between system components
* Designed and configured secure local network storage with JSON (data), XML (facial recognition data), and CSV (logs) formats to ensure efficient data handling
* Implemented encryption, authentication, and local network-only access to maintain data privacy and comply with security standards
* Reduced manual logging tasks by 70% and decreased attendance record errors by 80%, significantly improving operational efficiency

**SKILLS**

**Languages**: Python, JavaScript, TypeScript, C++, C#, PHP, SQL

**Databases & DevOps tools**: MySQL, PostgreSQL, Git, Linux, Jest (unit testing), Postman

**Frameworks**: Django, React, NextJs, Node.js, Express.js, Laravel, WordPress, Tailwind CSS

**Technologies**: SEO Optimization, Redux, WebRTC, RESTful APIs, WebSocket, Socket.IO, Hugging Face, Transformers.js, Agile