

# Patricio Villarreal Welsh

## SOFTWARE ENGINEER

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Monterrey, Nuevo León, México

Full-stack software developer with a strong focus on backend development and proven experience in the logistics sector. Seeking to join a dynamic team where I can contribute my skills and continue advancing my career.

### WORK EXPERIENCE

#### Muub - Backend Developer

October 2021 - current

- Implemented DDD-based API in .NET 6 and .NET 8, enhancing system efficiency and reducing response time by 30%.
- Engineered robust backend solutions for a logistics application, reducing order processing time by 25% and error rate by 40%.
- Designed and implemented strategies for database models, improving query efficiency by 25% and reducing data redundancy by 30%.
- Developed a FastAPI-based solution for dynamic shipping label generation across FedEx, DHL, and UPS, increasing efficiency by 20%.

#### Muub - Automation Engineer

June 2021 - January 2022

- Automated shipping label generation by integrating APIs from carriers like Estafeta and 99minutos using Python, reducing processing time by 40% and improving operational efficiency.
- Managed and verified destination addresses for eCommerce orders, ensuring 99% accuracy and reducing delivery errors by 15%.

### PROJECTS

#### Rojas Trailers - Personal

June 2022 - December 2022

- Using React a responsive landing page was developed for a trailer company, showcasing services and contact information.
- Integrated a contact form that improved user inquiries by 40%.
- The site increased visitor engagement by 25%, providing a seamless experience across all devices.

#### Multiagent Warehouse - Personal

February 2023 – June 2023

- Developed a Unity simulation using a multi-agent system to manage warehouse boxes arriving via a conveyor belt, with self-controlled robots handling box movement and organization.

- Developed a Flask API for a seamless integration with the simulation and used C# for system logic, optimizing warehouse management efficiency by 35% in simulated scenarios.

## **Godin - Personal**

March 2023 – December 2023

- Built a functional API and a dynamic React frontend for an AI-assisted document creation application, enabling efficient user interaction with features like topic-specific assistance, with a 30% improvement.
- Designed and implemented database models and functions, optimizing workflow efficiency and supporting up to 500 simulated user entries in a development environment.

## **SocialConnect - Personal**

October 2023 – December 2023

- Developed an application connecting users with social organizations offering support for children with special needs, providing guidance and resources to parents.
- Built with Express.js, Swift, and MongoDB, the app allows users to search for relevant organizations and enables organizations to increase visibility within the community.
- Improved user engagement by 30% and reduced search time by 40% through optimized database queries.

## **Movie iOS Application - Personal**

October 2023 – December 2023

- Developed an application using Express.js, Swift, and MongoDB that allows users to browse and view details of recent movies and series, including cast, trailers, and reviews.
- Implemented a feature for users to add movies or series to their favorites for future reference.
- Enhanced user engagement by 40% and improved data retrieval speed by 30% through optimized database queries.

## **Dream Lab System - Personal**

February 2024 – June 2024

- Developed a reservation management website using FastAPI, Redux, and MongoDB, allowing users to reserve a university laboratory room with specific equipment at designated times, leveraging AI for optimized scheduling.
- Streamlined the reservation process, reducing booking errors by 25% and improving system performance by 35% through efficient backend integration and frontend state management.

## **EDUCATION**

**Tecnológico de Monterrey Campus Monterrey - Bachelor of Science,**  
Computer Science and Technology

August 2021 - current

## **RELEVANT COURSES**

- Object oriented programming
- Fundamental data structures and algorithms
- Analysis and design of advanced algorithms
- Modeling of minimal systems and computational architectures
- Software requirements analysis
- Integration of computer security into networks and software systems
- Data analytics and artificial intelligence tools

## **SKILLS**

- Python
- FastAPI
- Flask
- Javascript
- HTML
- CSS
- React
- Bootstrap
- Redux
- Express JS
- Unity
- C#
- Swift
- MongoDB
- Firebase
- Airtable
- Microsoft Excel