

## **Manuel Alejandro Quistial Jurado**

**Email:** manuel.quistialj@gmail.com

**LinkedIn:** <https://www.linkedin.com/in/manuelquistial>

**GitHub:** <https://github.com/manuelquistial>

## **Career Summary**

Software Engineer and Electronic Engineer with 10 years of experience building enterprise software platforms, scalable web applications, and interdisciplinary technology solutions across public and private sectors.

Experienced in frontend and backend development using React, TypeScript, Java Spring Boot, Redux, PostgreSQL, and modern web architectures, contributing to enterprise systems, frontend migrations, feature development, API integrations, and testing strategies.

Additionally, experienced in AI and biomedical signal processing research focused on EEG, Brain-Computer Interfaces (BCI), Machine Learning, and neurotechnology applications.

Strong background in problem-solving, cross-functional collaboration, and building reliable software systems with a focus on scalability, maintainability, and user experience.

## **Languages**

- Spanish - Nativ
- English - Professional Working
- German - Limited Working

## **Core Skills**

- Frontend: React, TypeScript, Redux, Angular
- Backend: Java Spring Boot, Node.js, Express, Laravel, Flask
- Databases: PostgreSQL, MySQL, MongoDB
- Cloud & Tools: AWS Lambda, API Gateway, EC2, GitHub Actions, Jenkins, Docker
- Testing: Jest, WebdriverIO, Unit Testing, Integration Testing
- Research & AI: Python, Machine Learning, EEG Signal Processing, Brain-Computer Interfaces (BCI)

## **Professional Experience**

### **Anthology - Blackboard, Bogotá, Colombia**

*Software Engineer*

*Nov. 2021 – May. 2026*

- Developed and maintained enterprise frontend features using React, TypeScript, Redux, and modular monorepo architectures.
- Contributed to frontend modernization initiatives by migrating legacy Angular features to React, improving maintainability and user experience.
- Designed and implemented feature management interfaces integrated with AWS Lambda and Python-based feature flag services.

- Extended and maintained REST APIs using Java Spring Boot to support enterprise frontend integrations and business workflows.
- Implemented automated UI testing strategies using WebDriverIO to improve platform reliability and reduce regressions.

## **Freelance Software Engineer & Consultant**

*Self-employed*

May. 2022 – Present

### **Clients:**

- Babel Score
- Sal & Picciotto
- Universidad de Antioquia

### **Projects:**

- Developed and maintained custom web platforms and institutional software solutions using React, TypeScript, Laravel, WordPress, and PHP.
- Contributed to frontend modernization initiatives and backend migration projects for institutional and business platforms.
- Built reusable frontend and backend integrations focused on maintainability, scalability, and operational efficiency.
- Integrated authentication systems, automated reporting workflows, and content management solutions across multiple client environments.

### **Sal & Picciotto**

Custom WordPress and Shopify solutions focused on performance, extensibility, and scalable content management workflows.

### **Babel Score**

Marketplace and multivendor platform development with WordPress, ReactJS, PDFJS, and authentication integrations.

### **Universidad de Antioquia, Medellín, Colombia**

Frontend modernization and backend migration initiatives using React, TypeScript, Redux, Laravel, and Flask integrations.

### **Digital Americas Pipeline Initiative, Medellín, Colombia**

*Backend Developer*

*Feb. 2020 – Nov. 2021*

- Developed backend microservices using Node.js, Express, and AWS cloud services including EC2 and API Gateway.
- Built serverless workflows using AWS Lambda, SNS, and SQS to improve asynchronous processing and notification delivery.
- Contributed to distributed processing pipelines that improved execution times and operational responsiveness.
- Developed ElectronJS applications and Elastic Stack integrations for enhanced operational visibility and monitoring.

## **Research Experience**

### **NEUROCO – Neuroengineering research group, Medellín, Colombia**

*Jun. 2022 – Sep. 2023*

- Developed cognitive rehabilitation applications using Python and multimodal stimulus systems for neuroengineering research environments.

### **Undergraduate Thesis – Electronic Engineering, Medellín, Colombia**

*Jan. 2021 – Jun. 2021*

Analyzed optical contrast enhancement in hemograms using thin film interferometry techniques.

### **GEPAR - Research Group of Electronics in Power, Automation and Robotics, Medellín, Colombia**

*Jul. 2015 – May. 2016*

Designed and built the mechanical and electronic system for a catamaran ship to compete in the Hydrocontest event, improving speed, velocity, and energy efficiency.

## **Education**

### **Universidad de Antioquia, Medellín, Colombia**

*Master's degree in engineering*

*Feb. 2025 – (Expected Graduation: Dec. 2026)*

### **Universidad EAFIT, Medellín, Colombia**

*Specialization in Software Development*

*Jul. 2025 – (Expected Graduation: Dec. 2026)*

### **University of Antioquia, Medellín, Colombia**

*BS in Electronic Engineering*

*Aug. 2012 – Sep. 2021*