

# MATEO DUEÑAS

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## SUMMARY

Full-Stack Software Engineer (**Python, FastAPI, React and PostgreSQL**) focused on automation, data pipelines, and scalable web systems. Delivered production platforms that eliminated manual processing, enabled near real-time institutional reporting, and supported hundreds of active planning records.

## EDUCATION

### Bachelor of Software Engineering (Expected Jan 2026)

Escuela Politécnica Nacional · Quito, Ecuador · Oct 2020 – Present

- **Highest GPA in mid-program evaluation (Feb 2025)**
- Relevant coursework: Data Structures & Algorithms, Databases, Software Architecture, Web Development, Services & APIs, Agile Methodologies.

### English Sufficiency - B2 level

Centro de Educación Continua · Quito, Ecuador · Jul 2017 – Dec 2018

- Relevant coursework: Academic Four level, English Sufficiency Exam (B2) completed.

## EXPERIENCE

### Software Engineer Intern

Escuela Politécnica Nacional · Quito, Ecuador · Jan 2025 – Jul 2025

- Designed and operated backend services, frontend modules, and data pipelines (**Python, FastAPI, SQLAlchemy, React**) supporting institutional planning workflows with hundreds of active records.
- Collaborated with academic and administrative stakeholders to implement role-based access control and data validation rules, improving data consistency and reducing rework during reporting cycles.
- Consolidated bug fixes, dependency upgrades, and input sanitization into a single stabilization effort, restoring **100% platform availability** and preventing recurring failures through CI validation.

### Digital Inclusion Program Instructor & Academic Supervisor

Escuela Politécnica Nacional · Quito, Ecuador · Feb 2024 – Aug 2024

- Delivered hands-on training in digital productivity tools (Google Workspace, Zoom, Teams, Excel, Canva, ChatGPT) to rural educators and senior adults, contributing to an **85% completion rate** across **200+ participants**.
- Supervised **70+ instructors** and validated weekly deliverables for **120+ learners**, ensuring curriculum compliance and instructional quality.
- Reviewed work and provided structured feedback to **~20 educators and 40–50 learners weekly**, resulting in measurable improvements in practical evaluations.

### Computer Society EPN Chapter Chair

IEEE · Quito, Ecuador · Jan 2025 – Present

- Led the IEEE Computer Society chapter, organizing **30+ technical events** (workshops, coding sessions, competitions), significantly increasing student engagement.
- Coordinated collaboration between universities, international and local speakers and sponsors among events.
- Managed budget, prices, advertising (social media and events web pages) and contact with collaborators.

### Ambassador IEEEExtreme 19.0

IEEE · Quito, Ecuador · Jun 2025 – Oct 2025

- Promoted the global competitive programming event, increasing participation across student branches.
- Coordinated training sessions and served as liaison between local teams and the global organizing committee.
- Supported preparation efforts that led four EPN teams to place **Top 10 in Region 9 and Top 50 worldwide**.

## PROJECTS (CODE, DEMOS, AND DOCUMENTATION AVAILABLE IN PORTFOLIO)

### POA Management System (Thesis Project)

FastAPI · React · TypeScript · PostgreSQL · SQLAlchemy · Alembic

- Built a full-stack institutional platform managing **500+ POAs** and thousands of related records, supporting multiple director-level roles.
- Implemented automated ETL and validation pipelines that reduced institutional reporting cycles from **~3 months to near real-time**.
- Designed **RESTful APIs with RBAC**, schema migrations, and CI checks to ensure data integrity and long-term maintainability.

### Automated Certificate Generation System

Python · Selenium · Pandas · Web Scraping · ETL · Excel-Driven Automation

- Developed a fully automated workflow to scrape project data and generate multi-page academic certificates at scale.
- Reduced certificate production from **~1 week to ~30 minutes**, supporting **200–300 certificates annually**.
- Implemented repeatable, zero-intervention pipelines driven by structured Excel inputs.

### Travel Allowance Calculator

React · JavaScript · Geolocation API · Document Generation

- Implemented the core travel allowance calculation engine supporting multi-destination international trips and institutional rules.
- Integrated geolocation services to automatically find destination country and allowance coefficients from city input.
- Reduced end-to-end document generation time from **~30–60 minutes to ~5 minutes**, while maintaining required manual inputs for validation.

## SKILLS

### Languages & Frameworks

- Python, JavaScript / TypeScript, Java, C/C++

### Frontend

- React 18, React Hooks/Router/Forms, HTML5, CSS3, Bootstrap, SPA architecture, WordPrece, WooComerece

### Backend & APIs

- FastAPI, Node.js, Express, RESTful API design, Role-Based Access Control (RBAC), SQLAlchemy ORM, Alembic migrations, Authentication & Authorization (JWT, OAuth 2.0)

### Databases & Data

- PostgreSQL, MySQL, MongoDB, ETL pipelines, Excel automation, data validation, query optimization

### Testing & Quality

- pytest, API testing, input validation, CI quality gates

### DevOps & Cloud

- Docker, Git, GitHub Actions (CI/CD), AWS (Amplify, S3, CloudFront, Lambda), Render, Vercel

### Design & Prototyping

- Figma, UX/UI best practices, performance optimization

## CERTIFICATIONS (EVIDENCE AVAILABLE IN PORTFOLIO)

**Networking Basics** · CISCO (Mar 2023)

**Digital Transformation** · INSTITUTO EUROPEO DE POSGRADO (Feb 2023)

**Scrum Foundation Professional Certificate** · CERTIPROF® (Dec 2022)

**IEEE Membership** · IEEE COMPUTER SOCIETY (jan 2025)

## LANGUAGES

**Spanish** - Native

**English** - B2 (Intermediate–Advanced)