

PEDRO MÜLLER

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EXPERIENCE

Ostrom, VPP Team

Software Engineer

Berlin, Germany

Feb 2023 – Jan 2026

- Designed, implemented, and operated scalable backend services supporting smart meters, dynamic tariffs, and real-time energy data; owned integration of business-critical APIs and smart device connectivity.
- Implemented event-driven and scheduled workflows automating core energy market processes; contributed to optimization logic for flexible energy systems and dynamic pricing models.
- Led refactoring and stabilization initiatives, reducing technical debt; participated in architecture decisions and established cloud foundations for Python microservices on AWS.
- Promoted adoption of AI-assisted development tools through internal demos and workshops, increasing engineering productivity.

Pragmatic Industries

Software Engineer

Germany

Nov 2021 – Feb 2023

- Developed backend functionality from user stories and production requirements; implemented extensive unit tests, debugging, and reliability improvements across services.
- Coordinated with customers in recurring technical meetings; built a demonstration environment for product showcases and client onboarding.
- Translated industrial processes into software workflows and data processing logic; delivered features iteratively with stakeholders.
- Applied analytical problem-solving to diagnose issues and deliver fast, practical solutions.

Siemens Energy

Research Assistant

Munich, Germany

Oct 2020 – Sep 2021

- Conducted techno-economic analysis of hydrogen transport infrastructure using linear optimization models and mathematical programming
- Researched and analyzed regional hydrogen demand projections, contributing to strategic planning for future energy infrastructure
- Validated German gas network models and completed Master's thesis on hydrogen transport infrastructure optimization

EDUCATION

Technical University Munich (TUM)

Master of Science in Electrical Engineering and Computer Science

Munich, Germany

2018 – 2021

University of Porto (FEUP)

Bachelor of Science in Electrical Engineering and Computer Science

Porto, Portugal

2015 – 2018

PRESENTATIONS

Sword AI Summit: Building Real AI Workflows for Software Engineers

Nov 15, 2025

TECHNICAL SKILLS

Languages & Frameworks: JavaScript, TypeScript, React, React Native, Tailwind, Node.js, Nest.js, Python, Django, DRF, Flask, FastAPI, C

Database: MySQL, PostgreSQL, Redis

DevOps & Cloud: AWS (Lambda, ECS, SQS, SNS, CloudWatch; Certified Cloud Architect), CI/CD, GitHub Actions, Terraform, Docker

Tools: Jest, Pytest, Grafana, NewRelic, Sentry, Jira, Git, Monitoring

Methodologies: Microservices, Agile, TDD, System Design

LANGUAGES

German, Portuguese, English (Native/Bilingual); Spanish, French (Limited Working)