

# PEDRO MÜLLER

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## EXPERIENCE

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### Ostrom, VPP Team

Berlin, Germany

*Software Engineer*

*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

Germany

*Software Engineer*

*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

Munich, Germany

*Research Assistant*

*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

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### Technical University Munich (TUM)

Munich, Germany

*Master of Science in Electrical Engineering and Computer Science*

*2018 – 2021*

### University of Porto (FEUP)

Porto, Portugal

*Bachelor of Science in Electrical Engineering and Computer Science*

*2015 – 2018*

## PRESENTATIONS

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**Sword AI Summit:** Building Real AI Workflows for Software Engineers

*Nov 15, 2025*

## TECHNICAL SKILLS

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**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

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