

# 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 (TypeScript/NestJS, Python/Flask) supporting smart meters, dynamic tariffs, and real-time energy data processing.
- Owned integration of business-critical APIs and smart device connectivity, delivering high-impact features reliably to production.
- Implemented event-driven and scheduled workflows automating core energy market processes and operations.
- Contributed to optimization logic for flexible energy systems and dynamic pricing models.
- Led refactoring and stabilization initiatives, reducing technical debt and improving reliability and maintainability.
- Participated in architecture decisions and improved code quality, testability, and operational excellence. Established cloud foundations for Python microservices on AWS, enabling scalable cross-team development.
- Promoted adoption of AI-assisted development tools through internal demos and workshops, increasing engineering productivity.
- **Technologies:** TypeScript, Python, NestJS, Flask, PostgreSQL, Redis, AWS (Lambda, ECS, SQS, SNS, CloudWatch), CI/CD, Jest, Pytest, Monitoring

### Pragmatic Industries

Germany

*Software Engineer*

*Nov 2021 – Feb 2023*

- Developed backend functionality based on user stories and production requirements.
- Implemented extensive unit tests, debugging, and reliability improvements across services.
- Coordinated directly with customers to clarify requirements, changes, and progress in recurring technical meetings.
- Built a demonstration environment used for product showcases and client onboarding.
- Translated industrial processes into software workflows and data processing logic.
- Worked closely with stakeholders to iteratively deliver features aligned with real operational needs.
- Applied strong analytical problem-solving to diagnose issues and deliver fast, practical solutions.
- **Technologies:** Backend Development, APIs, Testing, Debugging, Customer-Facing Development

### 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

## VENTURES

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### DNS — Do Not Stop

*Founder*

- Streetwear clothing brand with a mission to inspire young people. [do-not-stop.com](https://do-not-stop.com)

### Catchup Digest

*Founder*

- Catch up on your newsletters in one digest, when you have time. [catchupdigest.com](https://catchupdigest.com)

## EDUCATION

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### 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

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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, Node.js, Nest.js, Python, Django, Flask, FastAPI, C

**Database:** MySQL, PostgreSQL, Redis

**DevOps & Cloud:** AWS (Certified Cloud Architect), GitHub Actions, Terraform, Docker

**Tools:** Grafana, NewRelic, Sentry, Jira, Git

**Methodologies:** Microservices, Agile, TDD, System Design

## LANGUAGES

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