

## Why ituma?

Are you a Python developer with a passion for clean back-end systems, data-driven solutions and IoT infrastructure – and looking for a product that really makes a difference in the real world? With us, you'll integrate data streams from physical sensor networks with scalable back-end architectures and have a direct influence on our core product, aduno®.

As a successful and financially independent IT company based in Hilden near Düsseldorf, we have been defining intelligent enterprise network solutions as one of the market lea-

We're waiting for you.  
What are you waiting for?



ders in Europe since 2010. Our team consists of experts with diverse specialist knowledge from a wide range of industries.



# PYTHON DEVELOPER (MID- TO SENIOR) BACKEND / API / DATA / IOT (W/M/D)

Full-time / permanent / Location: Hilden

## What you can expect

### Real IoT data. Real responsibility.

You'll be part of aduno®'s core development team, working at the interface between physical infrastructure and scalable software. From LoRaWAN sensor data and MQTT pipelines to high-performance REST APIs – you'll bring the data to life.

### Your mission

- **Backend development:** You will design and implement scalable APIs and microservices using FastAPI – from data integration to secure endpoints
- **IoT data pipelines:** Integration and processing of sensor data from LoRaWAN networks via MQTT and ChirpStack – you will ensure that no data point is lost
- **Database architecture:** Design and optimisation of TimescaleDB schemas for time-series data; high-performance queries for large data volumes are your speciality
- **API-Security:** Implementation of JWT-based authentication, refresh token strategies and modern authentication flows (including Redis session management)
- **DevOps-Integration:** Containerisation with Docker, helping to design CI/CD pipelines and deployment processes
- **Quality assurance:** Developing and maintaining a testing strategy using pytest, mypy and static code analysis tools (ruff, bandit) to ensure sustainable, secure code

## What you bring to the table

### Must-haves

- **Python proficiency:** Several years' practical experience with Python 3.10+ and knowledge of object-oriented and functional programming
- **FastAPI / REST:** Extensive experience in the development and design of RESTful APIs using FastAPI or a comparable framework (Flask, Django REST)
- **Databases:** Proficiency in PostgreSQL or TimescaleDB; understanding of time-series data and query optimisation
- **Messaging / IoT:** Knowledge of MQTT protocols and experience with processing real-time data streams
- **Docker:** Proficiency in using containers for local development and deployment
- **Testing mindset:** Practical experience with pytest and writing unit and integration tests

### Nice-to-haves

- Experience with ChirpStack or other LoRaWAN network servers
- Knowledge of Redis (session management, caching)
- Familiarity with modern authentication standards (JWT, OAuth 2.0, DPoP / RFC 9449)
- Basic knowledge of GitLab CI/CD or similar pipelines
- Understanding of Clean Architecture and scalable system designs
- Interest in network monitoring and carrier-grade infrastructures

## Your personality

- **Personal responsibility:** You take ownership of your components and proactively drive projects forward
- **Strong communication skills:** You can clearly communicate technical matters – both within the team and to stakeholders
- **Commitment to quality:** Clean code, sustainable solutions and meaningful tests are second nature to you

## What we offer you

### Technology & Projects

- **Real impact:** Your code runs on live networks – from corporate Wi-Fi and LoRaWAN sensor infrastructure to public transport systems
- **Modern tech stack:** Python 3.12+, FastAPI, TimescaleDB, ChirpStack, Docker, GitLab CI – no legacy baggage
- **Active involvement:** Your expertise matters – you have a real say in architectural decisions and the technical development of aduno®
- **High-end equipment:** Operating system of your choice – you decide what you're most productive with

- **Pragmatism:** You strike the right balance between perfection and time-to-market
- **Team player:** You enjoy sharing your knowledge, giving constructive feedback and working collaboratively to find the best solution
- **Willingness to learn:** You see IoT, network technologies and new Python patterns as exciting areas, not as obstacles

### Benefits

- **A family-like corporate culture** with flat hierarchies and short decision-making processes
- **An attractive remuneration package**, based on your expertise and the value you bring
- **Flexible working hours** and the option to work from home (hybrid)
- **A work-life balance**, that truly lives up to its name
- **Training budget** for conferences, courses and certifications
- **No dress code** – come as you are
- **Free drinks** and regular team events
- **Sport & leisure:** Hilden Sports Park and HiFly Trampoline Park nearby
- **Transport links:** Direct bus stop and large staff car park
- **JobTicket** for local public transport
- **Team spirit:** A team that sticks together and supports one another

## Interested?

Do you want to build backend systems that really make a difference – and are you passionate about Python, clean architectures and IoT data? Then let's talk!

Apply now with your CV, salary expectations and your earliest possible start date:

[hr@ituma.eu](mailto:hr@ituma.eu)

We'd particularly love to see:

- Links to open-source projects or public repositories
- Examples of code or system designs you're proud of
- Your thoughts on clean Python architecture or IoT data pipelines