

# Moisés Pérez Espinosa

## Senior Backend Developer

**Location:** Barcelona | **Mobile:** +34 662 232 089 | **Email:** moises.perez.esp@gmail.com

**LinkedIn:** <https://www.linkedin.com/in/moisesperezespinoza/> | **GitHub:** <https://github.com/zeferino90>

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## Professional Summary

Results-driven Senior Backend Developer with 10+ years of experience in designing, developing, and optimizing backend systems. Expertise in Python, cloud computing, containerization, and IoT solutions. Adept at building scalable and high-performance applications, implementing CI/CD pipelines, and leading cross-functional teams to drive efficiency and automation. Passionate about leveraging technology for sustainable and intelligent solutions. Strong leadership in mentoring junior developers and fostering knowledge-sharing environments.

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## Core Skills & Technologies

- **Backend Development:** Python (Primary), SQL, Django, Flask, FastAPI
  - **Error Tracking & Debugging:** Sentry
  - **Cloud & Infrastructure:** AWS (S3, EC2, RDS, Elastic Beanstalk), DigitalOcean, Docker, Docker Compose, Docker Swarm
  - **CI/CD & DevOps:** Git, Bitbucket pipelines, Jenkins, Bazel, Proxmox
  - **IoT & Communication Protocols:** MQTT, WebSockets, REST APIs, Edge Computing
  - **Agile & Project Management:** Scrum, Kanban, JIRA
  - **Databases:** PostgreSQL, MySQL, SQLite, ORMs (SQLAlchemy, Django ORM), MongoDB, Redis
  - **Testing & Quality Assurance:** Unit Testing, Integration Testing, Test Automation
  - **System Administration:** Linux, Windows Server, Networking
  - **Software Observability:** Prometheus, Grafana, OpenTelemetry
  - **Messaging & Event Systems:** RabbitMQ, Kafka
  - **Profiling & Concurrency:** Profiling in Python, asyncio, multithreading
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## Professional Experience

### ProtoPixel | Barcelona, Spain

**Senior Software Engineer** | Aug 2021 - Oct 2024

- Designed and developed a **lighting automation platform**, enhancing energy efficiency and user experience.
- Architected and integrated **multi-protocol smart device communication**, ensuring seamless interactions.

- Led the implementation of **remote light control**, **sensor-based automation**, and cloud-based energy optimization, achieving a **30% reduction in energy consumption**.
- Designed and deployed **containerized applications using Docker & DigitalOcean Apps**, improving scalability.
- Developed CI/CD pipelines for **automated testing, deployment, and release management**, reducing deployment time by **40%**.
- Mentored junior developers, fostering a **collaborative and high-performance engineering culture**.

#### SIMON | Barcelona, Spain

##### Software Engineer | Aug 2019 - Aug 2021

- Co-designed an **MQTT and WiFi-based communication protocol** for a new IoT product line, reducing latency by **25%**.
- Enhanced **SIMON's IoT ecosystem**, improving device connectivity and performance.
- Utilized **GitLab for version control and CI/CD**, ensuring code quality and rapid deployment.
- Developed IoT solutions in **Python and Docker**, enabling efficient microservices architecture.

#### ITnow | Barcelona, Spain

##### Backend Developer | Jun 2019 - Aug 2019

- Developed a **chatbot system** to unify internal business processes.
- Built backend services using **Python, Docker, and Git**, enhancing maintainability.

#### blauLabs | Sant Cugat, Spain

##### Customer Support & IoT Full Stack Edge Developer | Apr 2017 - Jun 2019

- Developed new features for the **Blaulabs IoT platform**, focusing on backend performance.
- Led the **Edge Connectivity Project**, optimizing cloud (AWS) and on-premise infrastructures.
- Led a **Level 3 technical support team**, managing and mentoring two support colleagues who handled Level 1 support, ensuring efficient issue resolution and a high level of customer satisfaction. - Provided **Level 3 technical support**, troubleshooting IoT-related system issues.

#### ENCO | Sant Cugat, Spain

##### Development and Support Engineer | May 2015 - Apr 2017

- Contributed to the **Blaulabs energy management system**, ensuring cloud reliability and security.
- Managed and improved the **support platform**, enhancing user knowledge and issue resolution.

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## Education

### MADR Master's Degree in Automation, Domatics, and Robotics

La Salle BCN | 2015 - 2016

### Bachelor's Degree in Computer Science (Computing Architecture Specialization)

Facultat d'Informàtica de Barcelona, UPC | 2008 - 2014

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## Projects & Achievements

- **CI/CD Infrastructure Overhaul:** Migrated legacy build servers to **Proxmox-based virtual machines**, improving reliability and disaster recovery.

- **Lighting Control Framework:** Developed a software framework for lighting automation, adopted across multiple projects for **standardized device interaction**.
  - **Mock IoT Gateway:** Built a simulated environment for **IoT device testing and development**, significantly reducing hardware dependencies for the engineering team.
  - **Cloud Migration & Optimization:** Led the transition of on-premise services to **DigitalOcean & AWS**, reducing costs and improving scalability.
  - **IoT Performance Optimization:** Implemented **asynchronous messaging** to enhance real-time device communication, reducing response times by **35%**.
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