# Guido Biosca Lasa

## Computer Engineering student

#### **SUMMARY**

Computer Engineering student with practical experience in machine learning, Python development, and backend engineering. Built ML models for fall detection from wearable sensor data, developed backend services for wildlife registry systems, and created a crypto-analysis bot that monitors 10,000+ assets in real time. Passionate about AI, algorithms, solving real-world problems with technology, and working with people — I learn fast, enjoy collaborating, and love meeting new people from different backgrounds.

#### **EXPERIENCE**

02/2025 - 08/2025**Telespazio** Barcelona, Spain

Software Analyst Intern

- Implemented satellite image processing pipelines to detect vegetation risks around power lines
- Acted as the lead backend developer for a Government of Aragón wildlife registration
- Designed REST APIs, database schema, authentication and data-validation logic
- Managed a small backend tearn of two interns: task assignment, code reviews and delivery planning
- · Improved backend reliability and maintainability through refactoring, unit tests and technical documentation

Air-Fi 07/2024 - 12/2024Barcelona, Spain

Machine Learning & Data Analyst Intern

- Implemented fall and position detection algorithms to monitor elderly users in real
- Worked on a healthcare project using wearable wristbands with accelerometers and gyroscopes
- Preprocessed and cleaned large time-series datasets for fall detection
- Engineered scalable workflows to aggregate, filter, and synchronize high-frequency
- Developed internal tools to automate data analysis, visualization, and feature extraction for the ML team

## **PROJECT**

## WayHer - Women's Safety App (prototype) ₽

*July 2025 - Present* 

07/2025 - Present

- Designed a web version (wayher.es) with map-based visualizations of danger zones
- Concept focused on increasing safety through community reporting and safer route suggestions
- Built backend logic and database structure to store real-time incident data

## **Crypto Market Analysis & Trading Bot** *∂*

November 2024 - Present

- Built a crypto-trading bot capable of analyzing over 10,000 assets across multiple exchanges in real time
- Integrated APIs from Binance, KuCoin and Poloniex to collect live market data
- Processed metrics like price movements, trading volume, market cap and order-book
- Implemented automated alerts and decision logic to detect potential price pumps
- Created a Telegram interface to configure the bot remotely

11/2024 - Present

### **Heuristic Search Solver - Hill Climbing & State-Space Optimization**

February 2025 - May 2025

- Built a Java solver using heuristic search and hill climbing
- Designed heuristics to reduce search cost and avoid local maxima
- Evaluated performance across different strategies and initial states

## Percolation Analysis Engine - Graph Theory & Visualization

September 2024 - December 2024

- Built a Python engine to simulate percolation on random graphs using NetworkX
- Analyzed cluster growth, connectivity loss, and phase transitions as nodes and edges failed
- Generated visualizations to track how graph structure evolved across iterations
- Used results to study network robustness and critical percolation thresholds

#### **EDUCATION**

#### **Technical University of Denmark (DTU)**

Exchange - Master-level Computer Science Courses

- Studying advanced courses in Machine Learning, Deep Learning and Data Analysis
- Hands-on projects including Graph Neural Networks for molecular dynamics simulations

## Universitat Politècnica de Catalunya (UPC BarcelonaTech)

Bachelor's Degree in Computer Engineering

- · Coursework in algorithms, data structures, machine learning and software engineering
- Experience designing efficient data structures, reducing computational cost and optimizing code performance.

09/2025 - Present

09/2022 – Present

Barcelona, Spain

Copenhagen,

Denmark

#### **SKILLS**

**Programming** Python, C++, Java **Machine Learning** 

Scikit-learn, TensorFlow, PyTorch

**Backend & APIs** 

REST APIs, FastAPI, Flask, Docker

**Tools** 

Git, Linux, Telegram Bots, Web

Scraping

Data & Analytics

Pandas, NumPy, Matplotlib, time-

series analysis

#### LANGUAGES

**English** — Fluent

**Spanish** — Native/Bilingual

Catalan — Native/Bilingual

#### **INTERESTS**

**Mountain biking (downhill & trail riding)**  $\mathscr{O}$  — Focus under pressure, attention to detail

**Skiing**  $\mathscr{D}$  — Adaptability to changing conditions, risk management

**Traveling**  $\mathscr{D}$  — Active listening, ability to connect quickly

09/2024 - 12/2024

02/2025 - 05/2025