# Luka Chiapponi

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## Personal Profile

Final-year AI student with hands-on experience building production machine learning systems, from model development through to automated cloud deployment. Currently applying for the Master Sustainable Energy Systems Management via EUREC, with the goal of working on data and software systems for grid management and renewable energy infrastructure.

## Education

| Year | Programme | Institution |
|---|---|---|
| **Upcoming** | **Master Sustainable Energy Systems Management** | **EUREC (European Renewable Energy Centres)** |
| **2023 – 2026** | Bachelor Applied Informatics (Specialisation AI) | Howest Brugge |
| **2022** | Secondary Education — Engineering | Athena Oostende |

## Work Experience & Internship

| Period | Role | Organisation | Details |
|---|---|---|---|
| **02/2026 – 05/2026** | Internship AI Researcher | Exail Belgium | Sonar data analysis: classification, pretraining feature extraction, continual learning, and detection models. |
| **Summer 2022 – 2023** | Student Worker, Technical Services | City of Oostende | Public domain maintenance and logistical support. |

## Relevant Projects

| Period | Project | Details |
|---|---|---|
| **2025 – 2026** | **AI Inspection Tool (SYA)** | Production-ready REST API for automated visual device inspection. Achieved **76% accuracy on inconsistently labelled real-world data**. Core: parallel AI inference (side recognition & damage grading) with Explainable AI (Grad-CAM) for transparent decision-making. **Tech:** Python, PyTorch, REST API, Docker, GitHub CI/CD, Pydantic. |

| Period | Project | Details |
|---|---|---|
| **2025** | **End-to-End MLOps Pipeline** | Scalable ML architecture with **fully automated retraining triggered on every code push**, eliminating manual intervention in the training cycle. Core: cloud-based model training and deployment via Kubernetes microservices (FastAPI, NGINX reverse proxy), CI/CD workflows for automatic redeployment on updates. **Tech:** Azure ML, Kubernetes, Docker, GitHub Actions, FastAPI, NGINX, Python. GitHub |
| **2024 – 2025** | **TraceWay (Full-Stack AR Navigation)** | AR navigation platform with crowdsourced risk mapping and hardware sensor integration for mobile safety notifications. Role: Team Lead App Development. Full-stack implementation including business analysis (UCD, ERD) and push notification infrastructure. **Tech:** Vue.js, JavaScript, Vite (client) / Java, Vert.x, SQLite, OpenAPI/Swagger (backend) / CI/CD, SonarQube, Vitest. |

## Technical Skills

| Domain | Skills |
|---|---|
| **AI & Machine Learning** | Machine Learning, Deep Learning, Reinforcement Learning, MLOps, Data Preprocessing, Python, AI Security, AI Ethics |
| **IT & Infrastructure** | Network Management, Cisco, DHCP, DNS, VMware, Linux, Bash, Pentesting |
| **Development** | Java, JavaScript, PHP, HTML, CSS |

## Languages

| Language | Level | Details |
|---|---|---|
| **Dutch** | Native | |
| **English** | C2 Proficiency | Cambridge Certified |

## Interests

Chess (strategy), Gaming, Film, Music.