

Pascal Musabyimana

AI Engineer | Computer Vision | Multi-Agent Systems

Ghent, Belgium

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Professional Summary

AI Engineer and Creative Technology & AI student specializing in multi-agent systems, computer vision, and LLM-assisted workflows. Proven experience delivering functional AI prototypes in corporate environments and building end-to-end AI workflows under real constraints. Strong focus on translating research and experimentation into practical, business-ready systems.

Technical Skills

Programming Languages

Python (primary), JavaScript, C#, Swift

AI & Machine Learning

Computer Vision, YOLOv8, SAM-2, Multimodal AI, Multi-Agent Systems, LLM Integration, Image Segmentation

Frameworks & Libraries

Streamlit, Gradio, React.js, Next.js, PydanticAI

Cloud & Tools

Git, GitHub, Google Cloud Platform (GCP), Firebase, MySQL, HuggingFace, Label Studio

Engineering Concepts

REST APIs, JSON, dotenv, AI system design, data pipelines, rapid prototyping, UX-driven development

Professional Experience

AI Solutions Engineer (Student / Part-time)

Internal AI Development | 2025 – Present

- Designed and deployed multi-agent AI systems to automate internal business logic and workflows
- Integrated LLM-based components with structured data pipelines and external APIs
- Led rapid prototyping cycles, delivering functional AI tools under tight deadlines
- Contributed to the operational adoption of AI-driven solutions

Computer Vision Software Engineer (Contract)

EasyPost Belgium – Zwijnaarde | 06/2025

- Engineered a YOLOv8-based computer vision pipeline for real-time anomaly detection
- Designed image processing and inference workflows under production constraints
- Project delivered as a proof-of-concept; further technical details protected under NDA

IT Consultant (Student Job)

Beego | 2021 – 2024

- Provided IT support for individuals in digital poverty
- Diagnosed and resolved hardware, software, and connectivity issues
- Maintained an average customer satisfaction score of 4.5/5

Logistics & IT Support

Cevi | 2021 – 2022

- Prepared and configured laptops and hardware for deployment
- Assisted with IT logistics and infrastructure support

Selected Projects

Boxing Video Analysis System

Computer vision pipeline using YOLOv8 and pose estimation to detect fouls from video footage.

Luminus AI Energy Assistant

Developed a multi-agent AI system providing energy advisory support through structured reasoning workflows.

Medical Imaging & Energy AI System

Designed a multimodal AI pipeline combining segmentation and structured report generation.

Brain Tumor Detection Prototype

Implemented a SAM-2-based medical image segmentation system.

Real-Time Tracking System (Ghent)

Object tracking using Kalman filters and particle filters for motion prediction.

Founder Experience

Founder – Lovia App

Ghent | 2021 – 2023

- Designed and built a student-focused social application
 - Developed MVP, UX flows, beta testing pipeline, and GDPR compliance
 - Managed product lifecycle from concept to deployment
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Education

Bachelor of Science in Creative Technology & AI

Howest University of Applied Sciences | 2024 – 2027

Interests

Calisthenics, AI & Machine Learning, Startups, Computer Vision, Data Science, Technology, Macroeconomics

References

Available upon request.