

Pascal Musabyimana

AI Engineer · Multi-Agent Systems · Computer Vision · B2B SaaS

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PROFESSIONAL SUMMARY

AI Engineer with hands-on experience building and shipping multi-agent systems, computer vision pipelines, and LLM-powered workflows in real B2B environments. Comfortable across the full stack — from backend data pipelines and AI agent architecture to frontend delivery and rapid prototyping. Founded a consumer app (Lovia), delivered production AI tools for enterprise clients, and consistently moved fast from idea to working product.

PROFESSIONAL EXPERIENCE

AI Solutions Engineer (Student / Part-time)

Sweetspot Experts — Deerlijk | 2025 – March 2026

- Designed and deployed multi-agent AI systems to automate internal B2B consulting workflows, reducing manual effort in discovery and reporting cycles
- Built an automated Discovery Report pipeline using Claude, Notion MCP, and structured prompt engineering — enabling evidence-grounded, chapter-by-chapter report generation with human review checkpoints
- Integrated LLM components with knowledge graph tooling (RDF/SPARQL, Intellispot/Skerpa platform) to power semantic search and structured data extraction from client interviews
- Generated client-ready PowerPoint deliverables from Notion pages using Sweetspot-branded templates, combining AI-generated illustrations and structured content pipelines
- Led rapid prototyping cycles under tight deadlines, contributing directly to the operational adoption of AI-driven solutions across the firm

Computer Vision Software Engineer (Contract)

EasyPost Belgium — Zwijnaarde | June 2025

- Engineered a YOLOv8-based computer vision pipeline for real-time anomaly detection in a logistics production environment
- Designed image processing and inference workflows under strict production constraints; delivered as a proof-of-concept (further details under NDA)

IT Consultant (Student Job)

Beego | 2021 – 2024

- Provided IT support for individuals in digital poverty; maintained a 4.5/5 customer satisfaction score

Founder – Lovia App

Ghent | 2021 – 2023

- Designed and built a student-focused social application from zero — product strategy, UX flows, MVP, beta testing, and GDPR compliance
- Managed full product lifecycle from concept through deployment, gaining firsthand experience with early-stage company building

SELECTED PROJECTS

BelgianPropertyCopilot (stealth) — AI-powered real estate analysis platform for the Belgian market. Combines web data ingestion with a multi-agent pipeline to generate comprehensive buyer reports covering pricing, energy efficiency, and risk assessment.

Refactor Agent (stealth) — AI-powered code refactoring service that performs semantic, structure-aware transformations on codebases. Supports interactive use, protocol-based integration with external AI tooling, and automated enforcement via CI.

Boxing Video Analysis System — Computer vision pipeline using YOLOv8 and pose estimation to detect fouls from video footage.

Luminus AI Energy Assistant — Multi-agent AI system providing energy advisory support through structured reasoning workflows.

Medical Imaging & Energy AI System — Multimodal AI pipeline combining image segmentation and structured report generation.

Brain Tumor Detection Prototype — SAM-2-based medical image segmentation system for tumor identification.

Real-Time Object Tracking (Ghent) — Motion prediction system using Kalman and particle filters for real-time tracking.

TECHNICAL SKILLS

Languages: Python (primary), JavaScript (TypeScript), C#, Swift

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

Frameworks: FastAPI, Next.js, React.js, Streamlit, Gradio, PydanticAI, Agno, Chainlit, Claude Code, Vibe Coding

Cloud & Tools: Git, GitHub, Docker, GCP, Firebase, PostgreSQL/pgvector, Redis, MySQL, HuggingFace, Label Studio

Engineering: REST APIs, MCP & A2A Protocols, AST-level Code Analysis (libcst), SPARQL/RDF, Knowledge Graphs, AI System Design, Data Pipelines, Rapid Prototyping

EDUCATION

Bachelor of Science in Creative Technology & AI

Howest University of Applied Sciences | 2025 – 2028

INTERESTS

AI & Machine Learning · Startups & Venture Building · Computer Vision · Data Science · Macroeconomics · Calisthenics