

Pascal Musabyimana

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

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SUMMARY

AI Engineer with hands-on experience building multi-agent AI systems, computer vision applications, and LLM-powered workflows. Passionate about turning AI ideas into working products, from rapid prototypes to production-ready tools. Experienced across backend development, AI integration, and end-to-end product development, with a strong interest in startups and applied AI.

EXPERIENCE

AI Solutions Engineer (Student / Part-time) 2025 – March 2026

Sweetspot Experts, Deerlijk

- Built AI agents to automate internal consulting workflows and reduce repetitive manual work.
- Developed an automated Discovery Report pipeline using Claude, Notion MCP, and structured prompting, enabling consultants to generate reports with built-in review steps.
- Integrated LLM workflows with knowledge graph technologies (RDF/SPARQL) to extract and organize information from client interviews.
- Automated the generation of client-ready PowerPoint presentations from structured Notion content.
- Rapidly prototyped internal AI tools, several of which became part of the company's daily workflow.

Computer Vision Software Engineer (Contract) June 2025

EasyPost Belgium, Zwijnaarde

- Developed a YOLOv8-based computer vision proof of concept for real-time anomaly detection on a logistics production line.
- Designed the image processing and inference pipeline while working within production constraints.
- Delivered the solution under NDA.

IT Consultant (Student Job) 2021 – 2024

Beego

- Provided IT support to people experiencing digital exclusion.
- Consistently maintained a customer satisfaction rating of 4.5/5.

Founder, Lovia App 2021 – 2023

Ghent

- Designed and built a student-focused social networking app from concept to beta release.
- Defined the product strategy, designed user flows, coordinated testing, and ensured GDPR compliance.
- Gained hands-on experience with the complete startup product lifecycle.

VOLUNTEERING

Volunteer Organizer June 2026

Off the Radar, Brussels · off-the-radar.com

- Volunteered at Off the Radar, an invitation-only gathering of AI builders, CTOs, and engineers in Brussels — helped organize the whole event end-to-end.

SELECTED PROJECTS

Luminus AI Energy Assistant

- Multi-agent system for energy advice built on structured reasoning workflows.
- Designed and shipped an AI-powered energy assistant that helps users understand energy billing, book service appointments, and receive personalized energy-saving recommendations.

- Implemented the agent with Eve, OpenAI, TypeScript, and custom tool functions; configured production environment variables and deployed the application on Vercel.

Live demo: <https://energyagent-ten.vercel.app/>

AI-Powered Finger Counting Learning System *Howest University of Applied Sciences | 2026*

- Built an educational AI application that recognizes children's hand gestures in real time using computer vision.
- Collected and labeled a custom dataset and trained a machine learning model for gesture classification.
- Integrated the solution with Raspberry Pi hardware, including a camera, OLED display, rotary encoder, buttons, and buzzer.
- Developed the application in Python using Gradio and Docker.
- Designed and laser-cut a custom enclosure, delivering a complete end-to-end prototype.

Technologies: Python, MediaPipe, Scikit-learn, Raspberry Pi, Docker, Gradio, Git, Linux

Computer Vision Sports Analytics *Personal Project | 2024*

- Developed a computer vision application to detect and track indoor football players and the ball from match footage.
- Created and annotated a custom dataset using Roboflow.
- Trained and evaluated a custom YOLOv8 object detection model.
- Built an end-to-end video inference pipeline using Python and OpenCV.
- Used ClearML to manage experiments and model versions.

Technologies: Python, YOLOv8, Ultralytics, Roboflow, ClearML, OpenCV

LinkedIn post: https://www.linkedin.com/posts/pascal-musabyimana-573b66178_hey-linkedin-network-i-have-decided-activity-7153396537753030657-_Vzm?utm_source=share&utm_medium=member_desktop&rcm=ACoAACoslacB56MwdRN6bL1P1uM5qLdxwYzUcg8

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, Streamlit, Gradio, PydanticAI, Agno, Chainlit, Claude Code

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

EDUCATION

BSc in Creative Technology & AI 2025 – 2028

Howest University of Applied Sciences

INTERESTS

AI & machine learning · startups & venture building · computer vision · data science · macroeconomics · calisthenics