

Marius Cezar Sirbu

AI ENGINEER

Email sirbumariuscezar@gmail.com · Phone +32 490 21 50 49 · Portfolio cezarsirbu.dev · Location The Netherlands

WORK EXPERIENCE

Pipeline Engineer

AI Square Group

May 2025 – August 2026 · Belgium

- Building **AIDA**, the document-analysis pipeline behind PULSE-R, a citizen-facing app for legal, banking, and insurance documents.
- Staged LLM pipeline: extraction schemas generated **at runtime** from an EAV config, compiled into live Pydantic models and passed to the model through **Instructor**.
- Per-model **structured-output routing** via LiteLLM across the Azure GPT-5.4 family and DeepSeek V4, with **supersede-only value history** for a full GDPR audit trail.
- Prompt-injection filtering**, plus per-stage cost and token tracking on every run.
- Eval-gated changes**: prompt and schema edits run against ground-truth data before they can merge.

Applied LLM Evaluation · Independent Contractor

Outlier

November 2024 – September 2025

- Authored and reviewed prompts for **LLM training and evaluation**.
- Graded model responses across **instruction-following, reasoning, truthfulness**, and harmlessness.
- Handled advanced mathematics and **complex-reasoning** tasks across diverse domains.

Computer Vision Engineer · Contract

Seagull Detection & Deterrent — fish farm, Moldova

2023 · Solo engineer

- 24/7 autonomous perimeter computer vision (multi-camera, night vision) driving an **8-point directional audio deterrent**.
- Fully **on-edge**: a **Raspberry Pi** orchestrator plus an **ESP32** sensor network, no cloud dependency.
- Owned end to end**, from the client's business problem to the system running on site. Major reduction in bird presence.

Computer Vision Engineer · Industry Project

Howest — Athlete AI Evaluation

2024 · Team of 3

- Coaching assistant for an Olympic-track athlete academy; **phase-detection** model trained on ~100 annotated videos per sport.
- Built a **spatial-trigonometry** layer reconstructing body position in **x/y/z**, with feedback bound to **exact video frames**.
- Adopted by the client **beyond proof-of-concept** scope.

EDUCATION

BSc Creative Technologies & AI

Howest University

2023 – 2026 · Belgium

Research Intern — Quantum-Enhanced Recommender Systems

Algoma University, Canada

Mitacs Quantum Initiative · 2026

Computer Science Foundations

STEP IT Academy

2016 – 2019

SKILLS

LANGUAGES & FRAMEWORKS

Python · Django · FastAPI · Pydantic · TypeScript · React · Next.js · C# / .NET

LLM & AGENTIC SYSTEMS

RAG · Agentic workflows · Tool / function calling · Structured output · Prompt engineering · Fine-tuning · Model evaluation

TOOLING

LiteLLM · Instructor · Azure AI Foundry · OpenAI · Anthropic · Vector databases

DATA & INFRASTRUCTURE

Docker · Kubernetes · MLOps / DevOps · Edge deployment (Raspberry Pi, ESP32)

ML & COMPUTER VISION

PyTorch · OpenCV · Computer vision

WAYS OF WORKING

Agentic engineering: spec-first, verification loops, exit gates, sandboxing · GDPR-compliant data handling · Agile / Scrum

LANGUAGES

Romanian (native) · Russian (native) · English (professional) · German (B1) · Dutch (learning)