Julien Petit--Colboc

Engineering student in computer science – AI, VR and robotics

julien.petitcolboc@gmail.com | Rouen, France | Portfolio | GitHub | LinkedIn

Summary

4th-year computer science engineering student (work-study/apprenticeship) at CESI and apprentice at CAPFI since January 2026. Lead developer of Cerebro, an LLM-based matching system in production whose scores I made explainable and measurable. Previously a research intern at CESI LINEACT on the teleoperation of robots in virtual reality. I am looking for an internship abroad starting in June 2027 (12 to 16 weeks) in AI, VR or robotics, ideally within a research team.

Experience

CAPFI · PARIS

Work-study engineer (R&D, AI)

Jan 2026 – Present

Lead developer of Cerebro, an internal tool that matches consultant profiles with client tenders using LLMs.

- Designed and put into production an asynchronous AI pipeline for extraction and scoring for tender × profile pairs, processing several hundred records via reliable batch management.
- Calibrated the scoring prompt (temperature, required or desired skills, three sub-scores) and added short justifications so users can verify each score.
- Built an annotated benchmark dataset to quantify and reduce the false positive and false negative rates of the scoring system.
- Automated the generation of daily reports for a team of ten salespeople and secured access to the API and web interface via SSO authentication. Stack: Python, FastAPI, Pydantic, SQLite, Docker, GitLab CI, Gemini.

CESI LINEACT · ROUEN

Research intern

Apr 2025 – Jul 2025

VR robot teleoperation application (Scrum; C#, .NET, Unity, REST API).

- Integrated the feed from a 360° camera mounted on the robot into an immersive VR view.
- Secured access to the robots with AES-256 encryption.
- Designed a real-time interface to edit the robot's waypoints.

Education

CESI ÉCOLE D'INGÉNIEURS · ENGINEERING DEGREE (MASTER'S LEVEL) · ROUEN

Computer science, work-study/apprenticeship

Oct 2025 – Sep 2028

CESI · INTEGRATED PREPARATORY PROGRAMME · ROUEN

Computer science

Sep 2023 – Jul 2025

Projects

Blink 2024

Python pipeline for end-to-end automation of video creation: it orchestrates AI agents (GPT-3.5 for the script, Stable Diffusion XL for images, OpenAI TTS for voice, Whisper for subtitling) and performs automated editing via MoviePy.

Thrive 2024

Cross-platform task manager (Android, iOS, Windows, macOS, Web) built with Flutter/Dart: Isar local database, categories, notifications.

Skills

AI and LLMs

LLM pipelines, Prompt engineering, Structured outputs, OpenAI and Gemini APIs, Stable Diffusion, Whisper

Programming languages

Python, C#, C++, Dart, JavaScript

Back-end

FastAPI, .NET, REST API, SQLite, Pydantic

VR, 3D and electronics

Unity, Arduino

DevOps and systems

Docker, GitLab CI, Git Flow, Linux/WSL, VMware, Wireshark

Activities

BDE CESI Rouen – Head of Communication

Oct 2025 – Present

Responsible for the BDE's communication strategy: creating visual content (Instagram, posters) and multimedia coverage of events.

CESI Robotics Club

2023 – 2024

Developed remote control of a BB-8 replica: web joystick (HTML, JS) and a Flask server that drives the Arduino over serial link.

Languages

French

Native



English

Professional, TOEIC planned



German

Beginner



Interests

Running, video games, audiovisual