Cédric CODJO

AI & ML Engineer

CONTACT

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cedriccodjo.dev

CORE SKILLS

- LLM architecture & RAG systems
- NLP
- Deep Reinforcement Learning
- Data Engineering & ETL
- Full-Stack development
- Microservices & DevOps
- Solutions architecture
- Generative AI

SOFT SKILLS

- Autonomy, rigour, discipline
- Teamwork, communication
- Curiosity

LANGUAGES

- French: native
- English: professional

PROFILE

As an AI & ML engineer, I design and ship intelligent systems, robust APIs and data pipelines to production. Certified RNCP Level 7 Information Systems Architect, specialised in LLM architectures, RAG systems, NLP, Reinforcement Learning and Generative AI, with strong Full-Stack skills.

EDUCATION & CERTIFICATIONS

Professional Master of Science, AI specialisation — *Jul. 2026*
EPITECH / Sèmè City - Cotonou, Benin

RNCP Level 7 - Information Systems Architect — *Dec. 2025*
ETNA (École des Technologies Numériques Avancées) - France

Master of Science, AI specialisation — *Sept. 2022 - Jul. 2025*
EPITECH (European Institute of Information Technology) - France

Bachelor's Degree in Computer Science - Internet & Multimedia — *Oct. 2019 - Jul. 2022*
IFRI-UAC - Abomey-Calavi, Benin

PROFESSIONAL EXPERIENCE

AI & ML Engineer — *Jan. 2026 - Present*
Freelance / Personal projects

- Designing AI solutions for everyday use: intelligent agents, RAG systems, productivity tools and automated assistants.
- Full-stack web development for freelance clients (NextJS, FastAPI).
- Prototyping AI systems: code analysis, NLP applications, voice interfaces and workflow automation.

AI & ML Engineer — *Jan. 2024 - Dec. 2025*
COBLOC ARCHITECTURE - Cotonou, Benin

- Built end-to-end a SaaS platform for architectural project management (NextJS, Node.js, MongoDB): financial tracking, dynamic PDF reports, document management.
- Integrated Whisper for on-site voice transcription: 60% less field note entry time, 95% accuracy.
- Microservices architecture with Docker; deployed via GitHub Actions CI/CD on Vercel and Render.

Backend Developer — *Feb. 2024 - May 2024*
TECHNOSERVE - Cotonou, Benin - Project

- Architected and developed RESTful APIs (FastAPI, PostgreSQL) for a platform connecting green-sector stakeholders in Benin; Swagger/OpenAPI documentation, data modelling and migrations with SQLAlchemy.

Full-Stack Developer — *Mar. 2023 - Aug. 2023*
DYRA BENIN - Natitingou, Benin - Internship

- Developed multiple web applications within an agile Scrum team (NextJS, TailwindCSS, Node.js/ExpressJS).

IT Department Intern — *Mar. 2022 - May 2022*
ARCEP BENIN - Cotonou, Benin - Internship

- Development and maintenance of internal web applications.

PROJECTS

AI SaaS for an architecture firm - *COBLOC ARCHITECTURE - Solo - In production*
Project management from design to handover, financial management, auto-generated PDF reports, Whisper voice transcription for on-site entry.
Stack: NextJS · Node.js · ExpressJS · MongoDB · Whisper · Diffusers · PyTorch · JWT · Cloudinary · Docker

RepoInsight AI - *Advanced RAG system with holographic avatar - Solo - Completed*
Semantic analysis of code, documentation and GitHub issues; generates architectural diagnostics and patches. Voice-First interface (Speech-to-Speech) with a real-time animated avatar. tree-sitter AST parser, hybrid search (Dense + BM25), Cross-Encoder Reranker, Reciprocal Rank Fusion.
95% relevance (Ragas) · ≤ 8 GB of VRAM (local GPU) · 28.9 s average end-to-end latency
Stack: Python · Next.js · FastAPI · Qdrant · tree-sitter · Ollama · Faster-Whisper · Kokoro-ONNX · Silero VAD · Jina Embeddings · BAAI Reranker · WebSockets · Docker

HOMEPEDIA - *Intelligent real-estate estimator - Team - In production*
ML and French open data (DVF, demographics, crime, education, housing) to estimate price per m². Role: Data Engineer & ML Developer (data architecture, PySpark ETL pipelines, regression models, API).
10 API endpoints · 5+ data sources · 2 regression models
Stack: Python · FastAPI · PostgreSQL · SQLAlchemy · Scikit-learn · PySpark · Pandas · NumPy · Pydantic · Joblib · Docker

Optimal Route Finder - *Team of 4 - Functional prototype*
Multi-AI pipeline: ASR (Whisper), NER (BERT) and Dijkstra. Microservices API Gateway, Redis caching, OpenStreetMap.
92% NER accuracy · 88% transcription accuracy · route in under 3 s
Stack: Next.js · FastAPI · BERT · Whisper · Dijkstra · Redis · Docker · OpenStreetMap

Beninese Food Detection - *Computer Vision - Team of 5*
Full AI component: YOLO fine-tuned on manually labelled images to detect the components of traditional dishes.
75% average accuracy · 25+ classes · 1,000+ labelled images
Stack: Python · YOLO · PyTorch · OpenCV · Hugging Face · FastAPI · Docker

Autonomous Taxi Agent - *Deep RL - Team of 4 - Completed*
Benchmark of Q-Learning, SARSA, Policy/Value Iteration and DQN, stabilised with replay buffer and target network.
95% success (DQN) · 8.5/10 average reward · convergence in under 2 h
Stack: Python · OpenAI Gym · PyTorch · DQN · Q-Learning · NumPy · TensorBoard

Waste-Sorting Conveyor - *RL robotics - Multidisciplinary team - Completed*
PPO agent controlling a robotic conveyor for colour-based sorting, with ROS integration (AI, electronics, mechanics).
95% colour sorting accuracy
Stack: Python · PPO · Stable-Baselines3 · OpenAI Gym · PyTorch · ROS · TensorBoard

TECHNICAL SKILLS

Languages	Python, JavaScript, TypeScript, SQL, Bash
Frameworks	, Next.js, Node.js, ExpressJS, FastAPI, TailwindCSS
LLM architectures	Transformer, Mixture of Experts, Sparse Attention, RLHF fine-tuning, Prompt Engineering, Function Calling, Agents
RAG & search	Naive, Advanced, Modular, Graph, Agentic and Corrective RAG; Qdrant, Jina Embeddings, BAAI Reranker, hybrid search, Reciprocal Rank Fusion, tree-sitter, Ragas
AI & ML	PyTorch, Scikit-learn, BERT, Whisper, DreamerV3, DQN, PPO, SAC, Optuna, Hugging Face, LangChain, Ollama, OpenAI and OpenRouter APIs
Data Engineering	PySpark, Pandas, NumPy, PostgreSQL, MySQL, MongoDB, Redis, SQLAlchemy, Pydantic, ETL pipelines
MLOps & DevOps	Docker, Caddy, CI/CD, GitHub Actions, TensorBoard, Weights & Biases, Swagger, pytest, GCP, Vercel, Render, VPS
Methods	Agile/Scrum, microservices architecture, REST API, Git