
Mohammed Chakib Belgaid, Ph.D.

Full-stack Product Engineer | AI systems and developer tools

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PROFILE

Full-stack product engineer with a Ph.D. in software engineering and 10+ years across applied AI, backend platforms, developer tools, research infrastructure, and startup delivery. Builds measurable systems end to end, from product workflow and APIs through local/open-model evaluation, cloud deployment, and systems-level instrumentation.

EXPERIENCE

AI Research Engineer / Lead AI Engineer - MCQ Scan

2024-present | Lille

- Led a production-facing no-code multi-agent platform from API architecture and frontend integration through deployment.
- Reduced LLM inference latency by 60% through inference optimization and prompt/tool-flow redesign.
- Fine-tuned a 7B-class local model to 95% task accuracy and built constrained pipelines with 100% schema-valid outputs.
- Built secure AI deployment paths on GCP with Cloud Run, Secret Manager, Artifact Registry, Docker, and GitHub Actions.

Software Engineer / Research Engineer - Qarnot Computing / Inria

2022-2024 | France

- Deployed PowerAPI energy-measurement infrastructure across 100+ computing nodes.
- Translated research tooling into operational infrastructure with explicit reproducibility and measurement-reliability constraints.
- Reduced software/container footprint by roughly 300x to improve deployment reproducibility and efficiency.

Ph.D. Researcher - University of Lille / Inria

2018-2022 | Lille

- Conducted empirical research on green coding and energy-aware software using a test-measure-optimize approach; thesis defended in December 2022.

Co-founder / CTO - Funecs

2014-2018 | Algeria

- Led product, architecture, team coordination, and client delivery for a serious-games advertising startup.
- Won the Ooredoo Startup Challenge 2016 and delivered a nationwide mobile-game campaign that helped drive 300,000 contract updates.

SELECTED PROJECTS

Whispbook - Self-hosted React/FastAPI audiobook studio with local TTS, subtitles, structured speaker-attribution workflows, LoRA adapters, and evaluation reports. github.com/chakib-belgaid/whispbook

Wattch - Rust daemon and CLI architecture for local energy measurement with RAPL, protobuf, Unix sockets, explicit evidence boundaries, and reproducible workflows. github.com/chakib-belgaid/Wattch

pyJoules - Python energy-measurement library for Intel RAPL domains and experiment reporting; 98k total PyPI downloads recorded in the evidence database.

SKILLS

Product and frontend: React, TypeScript, workflow design, frontend integration

Applied AI: agent workflows, tool calling, structured outputs, local LLMs, LoRA, Hugging Face

Backend and cloud: Python, FastAPI, Django, Docker, GCP, Cloud Run, GitHub Actions

Systems and measurement: Rust, Linux, C/C++, Unix sockets, protobuf, RAPL, PowerAPI

EDUCATION

Ph.D., Software Engineering / Energy-Aware Software - University of Lille / Inria, 2022

Engineering Degree, Computer Science - Ecole Nationale Supérieure d'Informatique, Algiers, 2016

Public portfolio edition. Email, GitHub, and LinkedIn are included; phone number is intentionally omitted.