Megha Sudheendran

PhD Student in Computer Science · University of de Lille · Lille, France

megha_ai@outlook.com | https://megha.fr | github.com/MeghaSudheendran | orcid.org/0009-0007-5768-6081

Software Engineering · Legacy System Migration · LLMs for Code · Privacy-Preserving AI

ABOUT

PhD researcher at Inria, Université de Lille, working at the intersection of software engineering and large language models. Research focuses on software evolution and legacy system migration. A core motivation is enabling **mission-critical and security-sensitive organisations** (banking, energy, aerospace, defence) to modernise legacy codebases while keeping proprietary code and data within controlled environments.

PROFESSIONAL EXPERIENCE

PhD Student — Sep 2025 – present
Centre of Inria, University of Lille — Lille, France

- Research on the subject "Experimentation with LLMs for Fortran Migration"
- Prompt-based migration of Fortran 77+Esope to Fortran 2008: prompt ablation, ChrF evaluation, runtime validation.
- Member of the Inria LLM4Code project

Teaching Assistant — Sep 2025 – present
IUT, University of Lille — Lille, France

- Introduction to Software Development — Labs

AI / ML Engineer — Mar 2024 – Jan 2025
Mind7 Consulting — Paris, France

- Developed RAG-based chatbots with Azure OpenAI and Azure Semantic Search.
- Optimised retrieval pipelines (re-ranking, table-to-text, Pandoc) and implemented LLM memory trimming.
- Prompt engineering, fine-tuning, and query rephrasing. Deployed on Azure VM.

Data Engineer — Apr 2023 – Mar 2024
apiday — Paris, France

- Applied BERT sentence transformers for automated sentence mapping between sources and databases.
- Designed and deployed cloud functions; data collection, cleaning, and Airtable integration.

Data Scientist (Internship) — Sep 2022 – Feb 2023
TIBCO Inc. — Paris, France

- Led the AIaaS initiative: reusable AI components for TIBCO Spotfire, CI/CD pipelines, unit tests for ML.
- Affinity analysis research; integrated AI systems into distributed infrastructure.

Android Developer — Jan 2016 – Aug 2019
Srishti Innovative Computer Systems — Trivandrum, India

- Built custom Android apps in Java; integrated social sign-in and payment gateways (PayPal, Stripe).

Software Engineer — PHP Trainee — Jun 2014 – Dec 2014
J'OvertMatics Technologies — Trivandrum, India

- Web application development and database management (SQL, stored procedures).

EDUCATION

Ph.D. in Computer Science 2025 – present
Université de Lille / Inria Lille

M.Sc. in Artificial Intelligence Systems 2021 – 2023
EPITA, Paris

B.Tech. in Computer Science & Engineering 2009 – 2013
University of Kerala, Trivandrum

PUBLICATIONS

Under Review

Sudheendran, M., Safina, L., & Anquetil, N. (2026). A Study of Prompting Strategy for Low-Resource Legacy Language Migration. *Under review — ICPC 2027, International Conference on Program Comprehension.*

TEACHING

Teaching Assistant 2025–2026 · 2026–2027
IUT Lille Lille, France

- Introduction to Software Development — Labs.

TECHNICAL SKILLS

AI / LLM	LangChain · Azure OpenAI · RAG · Prompt Engineering · RAGAS · Hugging Face
ML / DL	TensorFlow · Keras · Scikit-learn · NLP · Transformers · FastAPI
Languages	Python · Pharo
Engineering	Docker · CI/CD · Azure VM · Git
Databases	Chroma DB · PostgreSQL · Azure AI Search · MySQL

CERTIFICATIONS

Generative AI Fundamentals	*(Databricks)*	2024
NLP for ML with Python	*(Australian Computer Society)*	2024
Associate Cloud Engineer	*(Google Cloud)*	2023
TIBCO Spotfire Certified Professional	*(TIBCO Inc.)*	2023
Fundamentals of Deep Learning	*(NVIDIA DLI)*	2021

LANGUAGES

English — Proficient (working language) **French** — Intermediate