George Adaimi

Lausanne, Switzerland

+41 787325254 | georgeadaimi@gmail.ch | github.com/george-adaimi | linkedin.com/in/georgeadaimi

Personal Profile

Senior Research Engineer with a PhD in Computer Science from EPFL and 7+ years of experience across applied AI research, GenAI systems, computer vision, and production-oriented ML. Currently leading Core AI Models at UBS, where I develop agentic workflows, RAG-based GenAI frameworks, and LLM-powered systems for document review and client intelligence. I specialize in turning ambiguous AI opportunities into evaluated prototypes and deployable systems, balancing research exploration, technical feasibility, and business value.

Technical Expertise

AI / ML	GenAI, Agentic AI, llama.cpp, RAG, Prompt engineering, Deep learning, Representation learning, Computer vision, Outlier detection
AI Engineering	LangGraph, LangChain, OpenAI API, PyTorch, TensorFlow/Keras, model training and evaluation, experimentation, prototyping, Spec-driven development
Software / MLOps	Python, Docker, Azure, Kedro, CI/testing, system design, Unity3D, OpenCV
Languages	English (Fluent), Arabic (Fluent), French (Proficient)
Leadership	Technical ownership, Mentoring, Stakeholder communication

Experience

UBS *Lausanne, Switzerland*

Senior Data Scientist - Head of Core AI Models *June 2024 - Current*

- Lead the design and development of agentic workflows for client onboarding, document review, and client narrative generation helping business users accelerate review.
- Built a GenAI framework for reviewing policies and marketing materials, combining LLM prompting, workflow orchestration, and evaluation.
- Coordinate with business stakeholders, engineering teams, and governance functions to define AI use cases.
- Own system design decisions for AI models and software components developed by the team, balancing speed of delivery, reliability, governance, and business requirements.
- Introduced spec-driven development practices and integrated them into UBS-wide delivery processes to improve alignment between business requirements and AI-assisted software development.
- Support team execution by reviewing technical designs and mentoring engineers on GenAI and agentic AI implementation.
- **Tech:** GenAI, LangGraph, Spec-Driven Development, RAG, Agentic AI, Prompt Engineering

Credit Suisse *Lausanne, Switzerland*

Senior Data Scientist - AVP *May 2023 - June 2024*

- Developed and maintained trade surveillance models for enterprise-scale monitoring and compliance workflows.
- Built statistical calibration tools for surveillance systems including NASDAQ SMARTS and SteelEye, supporting model tuning, outlier detection, and threshold analysis.
- Collaborated with compliance and technical stakeholders to improve model reliability, interpretability, and operational usability.
- **Tech:** Statistical modeling, Calibration, Outlier Detection

Visual Intelligence for Transportation, EPFL *Lausanne, Switzerland*

Research Scientist (Post-Doctoral) *Sept 2022 - April 2023*

- Developed Transformer-based models for unbiased scene graph generation.
- Improved multi-task learning methods for keypoint and object detection.
- **Tech:** Computer Vision, Object Detection, Relationship Detection, Keypoint Detection

Stanford Medical AI and Computer Vision Lab, Stanford *Stanford, CA-USA*

Visiting Researcher *Sept 2021 - April 2022*

- Extracted action and motion-related features from infrared radiation (IR) sleep videos.
- Developed a data-driven deep learning approach for detecting REM behavior disorder (RBD) using IR videos.
- **Tech:** RBD video-based Detection, Movement Detection

Visual Intelligence for Transportation, EPFL *Lausanne, Switzerland*

Ph.D. Candidate *Sept 2017 - Aug 2022*

- Developed representation learning frameworks for visual re-identification.
- Developed deep object detectors for aerial images using fields.
- Developed Transformer-based models for object and relationship detection.
- Built and deployed perception models on a smart Segway for real-world evaluation, bridging research prototypes and field testing. (*link*).
- Open-sourced research code (*link*) and developed online demos (*link*).
- Led teaching assistance for EPFL's Deep Learning course, mentoring students in PyTorch, model design, and applied ML.
- **Tech:** Computer Vision, Object Detection, Relationship Detection, Re-Identification

IT Administrator:

- Set up and maintained all lab computational resources.
- Managed lab infrastructures and online resources.

Atheer Inc. *Mountain View, CA-USA*

Software Engineer *June 2016 - Aug 2016*

- Developed the testing framework for the AirFlow platform (using Espresso).
- Developed the testing framework for the AirHub website (using Selenium).
- Initiated the development of their AirFlow product on Hololens.
- **Tech:** Unit Tests, UI Tests, Continuous Integration

Education

École Polytechnique Fédérale de Lausanne (EPFL) *Lausanne, Switzerland*

Ph.D. in Computer Science *Sept 2017 - Aug 2022*

- **Supervisor:** Prof. Alexandre Alahi
- **Research Interests:** Machine Learning, Deep Learning, Computer Vision, Data Engineering

American University of Beirut *Beirut, Lebanon*

Bachelor of Engineering in Computer and Communications Engineering *Sep 2013 - June 2017*

- **Focus:** Data Structures and Algorithms, Software Engineering, and Digital Systems and Design
- GPA: 95.42/100. Dean's Honor for 4 years

Selected Projects

Music Genre Classification using Semi-supervised learning and Graph Neural Networks

- Trained and evaluated different Graph-based semi-supervised techniques and Graph Convolutional Neural Networks on the FMA dataset

A Drone Vision System with an Accelerated Design for Deep Learning

- Implemented a convolutional layer using VHDL for a Field-Programmable Gate Arrays (FPGA).

Publications

Automated Detection of Isolated REM Sleep Behavior Disorder Using Computer Vision
Mohamed Abdelfattah, Li Zhou, Oliver Sum-Ping, Anahid Hekmat, Joanna Galati, Niraj Gupta, **George Adaimi**, Salonee Marwaha, Ankit Parekh, Emmanuel Mignot, Alexandre Alahi, Emmanuel During *Annals of Neurology* 97.5 (2025) pp. 860–872

Traffic perception from aerial images using butterfly fields
George Adaimi, Sven Kreiss, Alexandre Alahi *Transportation Research Part C: Emerging Technologies* 153 (Aug. 2023) p. 104181

Composite Relationship Fields with Transformers for Scene Graph Generation
George Adaimi, David Mizrahi, Alexandre Alahi *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2023

Real-Time Localization and Closed-Loop Control of Assistive Furniture
Lixuan Tang, Chuanfang Ning, **George Adaimi**, Auke Ijspeert, Alexandre Alahi, Anastasia Bolotnikova *arXiv (under review in IEEE RA-L)*, 2023

Visual Scene Understanding for Transportation: From Detecting Objects To Relationships
George Adaimi *Ph.D Dissertation*, 2022

Automated Detection Of Isolated Rem Sleep Behavior Disorder During Single Night In-Lab Video-Polysomnography Using Computer Vision
George Adaimi, Niraj Gupta, Ali Mottaghi, Serena Yeung, Emmanuel Mignot, Alexandre Alahi, Emmanuel During *Sleep* 45 (2022)

Deep Visual Re-identification with Confidence
George Adaimi, Sven Kreiss, Alexandre Alahi *Transportation Research Part C: Emerging Technologies* 126 (2021) p. 103067

Learning nuisances to track pedestrians in autonomous vehicles
George Adaimi, Alexandre Alahi *18th Swiss Transport Research Conference*, 2018

Forecasting Human Fine-grained Behaviours
Simon Romanski, **George Adaimi**, Alexandre Alahi *18th Swiss Transport Research Conference*, 2018

Service

2019-2021 **Coordinator**, EPFL Xplore

- Supervised the "Xplore student association" of a total of 44 students whose aim is to build a Martian Rover to participate in international competitions (*link*). Ranked 3rd and won 3 prizes after 1 year (*link*).
- Supervised projects related to 2D and 3D computer vision and path planning using cameras and LiDARs.

2014-2016 **Microsoft Student Partner**, Microsoft

- Assisted in organizing different workshops.

2003-2016 **Troop Leader**, Scout of Lebanon

- Organized camps, leadership, survival, and team building workshops for 40+ teenagers.

Teaching

CIVIL-459 (English): Deep learning for autonomous vehicles

- Designed all course assignments and provided training in Python, Pytorch, and machine learning.
- Organized and supervised the first human-robot tandem race. (*link*, *radio*)
- Gave lectures on Person Re-identification and Object Detection.

CS-119 (French): Information, calcul, communication

- Assisted students in C++ programming assignments.

MATH-111 (French): Algèbre linéaire

- Assisted students in linear algebra assignments.

Extracurricular Activities

University Activities Instructor and Treasurer of AUB Plus Club (2014-2017)

Interests Hiking, Running, Rugby, Camping, Skiing

References available upon request.