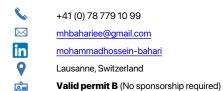


Mohammad-Hossein Bahari

Al Expert



Highlights

- 6+ years of work experience in applied deep learning with leading companies such as Honda, Valeo, Five AI
- Expertise in GenAl including NLP, RAG, Transformers and LLMs/VLMs
- Track record of end-to-end project execution from data preprocessing, model design and evaluation
- Several publications in top-tier AI conferences in generative AI and robustness
- · Awarded Marie Skłodowska-Curie doctoral fellowship and consistently honored for academic excellence
- Invited as a guest speaker at Waymo, Fei-Fei Li vision lab, and Porsche
- Strong project management and team-work experience with a mission-driven mindset

Core Experiences

VITA Lab, EPFL, Lausanne, Switzerland [09.2018-10.2024] *AI Researcher*

- Led end-to-end projects resulting in enhancing AI models' safety and robustness
- Developed foundation models for sequence prediction
- Improved sequence prediction utilizing LLMs, VLMs, and transformers
- Fine-tuned LLMs, and optimized prompts
- Developed adversarial attacks and synthetic data

Five AI (Bosch), Oxford, UK [06.2022-12.2022]

Al Engineer (Internship)

- Developed explainable AI solutions
- Implemented/analyzed various interpretability techniques
- Discovered model failures using provided explanations

Honda, Tokyo (remote), Japan [09.2018-10.2024] *AI Researcher*

- Developed intention prediction methods to improve social robot's interactions
- Designed knowledge-based neural network solutions
- Developed comprehensive safety evaluation protocols

Valeo, Paris (remote), France [03.2022-06.2022] *Al Researcher*

- Optimized a sequence prediction model
 - Implemented distributed parallel training on multiple GPUs
- Designed graph-based models with attention mechanism

Skillsets

Machine learning:

Generative AI (LLM, VLM), RAG, Transformers, Computer vision, Robustness, Generalization, Interpretability, Knowledge-based AI

ML software:

Tensorflow, PyTorch, HuggingFace, LangChain MLOps, CI/CD, Git Docker, Kubernetes, Slurm, AWS, Azure

Software:

Python, C/C++, Matlab, CUDA, Bash

Soft skills:

- Fundamentals of entrepreneurship
 By: EPFL Innovation Park (Business Concept)
- Foundations of project management By: Coursera
- Team-work, great communication, Problem solver

Education

(PhD) Swiss Federal Institute of Tech. (EPFL),

Lausanne, Switzerland [09.2018-02.2024]

Computer Science

- Advisor: Prof. Alexandre Alahi
- Thesis: "Safeguarding deep trajectory forecasting models"

(BSc/MSc) Sharif University of Technology,

Tehran, Iran [09.2012-06.2018]

Electrical and Computer Engineering

Thesis: "GPU implementation of 5G blocks"

Publications (simplified titles)

- "Knowledge-based neural networks for visual navigation", Transportation Research part C (TRC) 2021, Link
- "Adversarial evaluation for sequence generation", Transportation Research part C (TRC) 2022, link
- "Synthetic data generation for autonomous driving", CVPR 2022, link
- "A comprehensive framework for generalization evaluation", ECCV 2024, link
- "Causal visual navigation of autonomous robots", Under review 2024, link
- "Certification for autonomous robots", CVPR 2025, link

Teaching and Mentoring

Springs 2019-2022 Deep Learning for Autonomous Vehicles (CIVIL-459), EPFL, Lausanne, Switzerland

Instructor and course assistant (Main Instructor: Prof. Alexandre Alahi)

Supervised 20 Interns for 9 projects, EPFL, Lausanne, Switzerland Summer 2020

Summer 2021 Project manager and team lead

Supervised 9 Master students, EPFL, Lausanne, Switzerland 2018-2024

Project manager and team lead

Summer 2018 Introduction to TensorFlow for Machine Learning, Sharif university, Tehran, Iran

Honors and Awards

Awarded Marie Skłodowska-Curie Fellowship by the European Union for the doctoral degree
Accepted into EPFLinnovators program as a part of the Ph.D.
Rank 1 st among 20 Electrical engineering master students, Sharif university
Rank 5 th among 25,000 applicants in nation-wide entrance exam for MSc degree, Iran

Rank 54th among 300,000 applicants in nation-wide entrance exam for BSc degree, Iran,

Talks

Winter 2020

2011

Fall 2022	Waymo, San Francisco, US
Fall 2022	Stanford Vision and Learning Lab (Fei-Fei Li's group), Stanford, US
Spring 2022	Porsche group, Stuttgart, Germany
Summer 2022	Computer Webinar Series (CWS), Amirkabir university, Tehran, Iran

Seminars of Advanced Topics in Computer Science (WSS), Sharif university, Tehran, Iran

Hobbies Languages

English (C2) | French (A2) | Persian (Fluent)

Hiking | Reading | Traveling