Aryan Esfandiari

Personal Information

Location:	London, United Kingdom
Citizenship:	Norwegian & British
Phone:	+44 739 7131 703
email:	arian88@gmail.com

Experience

2023 - present

Behold.AI Technologies – London, United Kingdom
Head of Artificial Intelligence

Head of department of artificial intelligence at a world-leading medical technology provider and the only AI-enabled Care Quality Commission (CQC) certified in the United Kingdom. Leading an innovative team of researchers committed to pioneering research and development in medical imaging through applied machine learning. Research of critical and life-saving applications employing multi-modalities such as 2D X-ray and 3D CT imaging for medical and clinical classification, identification, and segmentation. Engaging in cutting-edge research in computer vision technologies, including convolutional neural networks, transformers and generative models in addition to advancing image and text-based Large Language Models (LLMs) for the generation of clinical reports. Successfully deploying the entire pipeline as time-critical and real-time applications in hospitals and NHS Foundation Trusts by implementing the latest advancements in MLOps and SafeAI.

2019 - 2023

Huawei Technologies R&D UK – Cambridge, United Kingdom
Senior Artificial Intelligence Researcher and Engineer

Cambridge and London Research Centre (2012 Laboratories) – Computer Vision.
Research on various deep learning advancements such as supervised and self-supervised learning with novel neural network architectures including but not limited to convolutional neural networks, transformers, autoencoders, generative, adversarial and recurrent neural networks. During my employment, I have had the opportunity to study and analyse state-of-the-art deep learning and computer vision advances in addition to development of innovative approaches. I was honoured to be a part of numerous leading research, university collaborations and had the privilege of attending several international conferences.

2016 - 2019

Advanced Micro Devices – Edinburgh, United Kingdom
Senior Machine Learning Design Engineer

Implementation of efficient deep convolutional neural networks with Pytorch and Tensorflow with respect to the embedded hardware and accelerators. Engaged in model optimisation, including compression and quantisation based on FPGAs for low-latency computations and inference in data centres and cloud computing services such as Amazon AWS. Contributing to several deep learning frameworks and libraries such as Xilinx Vitis™ and investigating into a variety of System-on-Chip architectures for artificial intelligence including dedicated AI Engines and advanced DSPs.

2014 - 2015

Samsung – California, United States
Embedded System Engineer

Research on advanced embedding systems for commercialised Internet of Things (IoT). Development of ARM Cortex-M for on-board data acquisition and processing alongside contributions to circuit design, digital electronics, sensors and simulations.

Education

2020 - | Doctor of Philosophy in Medical Artificial Intelligence, **King's College**
Dissertation: "Artificial Intelligence at the edge: From time-consistency and 3D human pose estimation models to neurological outcome with on-board computing"
School of Biomedical Engineering & Imaging Sciences
EPSRC CDT in Smart Medical Imaging at **King's and Imperial College London**
Supervisors: Prof. M. Jorge Cardoso, Prof. Sebastien Ourselin FREng FMedSci

2014 - 2016 | Master of Science in Robotics and Intelligent Systems, **University of Oslo**
Dissertation: "High-speed neural stimulation with Artificial Neural Network approaches based on Dynamic Vision Sensor and Embedded Systems"
GPA: A / A – Supervisors: Prof. Philipp Dominik Häfliger, Prof. Koen Gerard Vervaeke

2014 | Master of Science in Robotics and Intelligent Systems, **University of California, Berkeley**
GPA: A / A – Supervisors: Prof. Ikhlaq Sidhu, Prof. Naeem Zafar

2010 - 2014 | Bachelor of Science in Robotics and Intelligent Systems, **University of Oslo**
GPA: B / A – Supervisor: Prof. Ketil Røed

Publications, Achievements and Awards

2024 | **Reviewer at CVPR2024:** Reviewer at The Conference on Computer Vision and Pattern Recognition

2020 | **Winner of AIM at ECCV2020:** Ranked as 1st place in "Advances in Image Manipulation workshop and challenges on image and video manipulation" for both fidelity and perceptual tracks of extreme spatiotemporal video super-resolution.

2019 | **Future Star of Huawei:** Recognised as one of the most enthusiastic, passionate and dedicated new starters for novel and innovative deep learning research in addition to outstanding teamwork.

2018 | **Recognition award of AMD:** Awarded for distinguished research and development of hardware optimised and efficient deep convolutional neural networks that led to multiple in-house and commercial patents.

2015 - 2016 | **The Best Student Project Award:** Achieved the best student project of University of Oslo. This was related to my recent projects including "Medical Robot for Healthcare", "Modular Walking Robot" and "Pool Detection and Path Identification with Computer Vision approaches in OpenCV".

Languages

English: Fluent (IELTS Academic - C2 Proficient)
Norwegian: Native
Persian: Native

Computer Skills

Technologies: Computer Vision, CNNs, Transformers, GenAI, LLMs, SafeAI, MLOps
Frameworks: Pytorch, Tensorflow, Keras, Monai, HuggingFace, Open-CV, Scikit-learn
Languages: Python, Matlab, C/C++, Java, Bash, VHDL, SystemVerilog, LaTeX
Others: Robotics, Signal Processing, Linux, Docker, Github, Embedded Systems, FPGAs