Aryan Esfandiari

Personal Information

Location:	Cambridge, United Kingdom
Citizenship:	Norwegian
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Experience

2019 - present | **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 (Xilinx)** — 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 artificial intelligence accelerators. I was also responsible for model optimisation, including compression and quantization based on FPGAs for low-latency computations and inference in data centres and cloud computing services such as Amazon AWS. During my time with AMD, I had the opportunity to be a part of several deep learning frameworks and libraries development such as Xilinx Vitis™ and to investigate into a variety of System-on-Chip architectures for artificial intelligence including dedicated AI Engines and advanced DSPs.

2014 - 2016 | **University of Oslo** — Oslo, Norway
Research Assistant

Teach undergraduate and postgraduate modules, including Introduction to Robotics, Computer Vision and Advanced Artificial Intelligence. Design of course materials, curriculum and syllabus. Technical supervisor of student's dissertation and publication. Final examiner, grader and assignment marker.

2014 | **Samsung** — California, United States
Embedded System Engineer Intern

My main responsibility was to develop commercial applications for ARM microcontrollers including bootloader and firmware in C and C++. I was also involved in other fields such as circuit design, digital electronics, sensors and simulations. This internship shaped my academic knowledge to high-quality experiences and skills in the heart of Silicon Valley.

Education

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 – Advisor: Prof. Philipp Dominik Häfliger, Prof. Koen Gerard Alois Vervaeke

2014 | Master of Science in Robotics and Intelligent Systems, **University of California, Berkeley**
GPA: A / A – Exchange semesters

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

Publications, Achievements and Awards

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 Xilinx:** 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".

Organisation

2012 - 2016 | **Robotica Osloensis / UIO UAVs:** Deputy and board member in student organisation for research and development in Robotics, Intelligent Systems and Unmanned Aerial Vehicles. My field of interest and projects were focused primarily on conventional computer vision approaches including deblurring, denoising, stabilisation and deep learning algorithms for instance and semantic segmentation in addition to super-resolution with the objective of image and video enhancement for data acquisition from unmanned aerial vehicles.

Languages

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

Computer Skills

Frameworks: Pytorch, Tensorflow, Keras, Open-CV, Scikit-learn, Numpy and Notebook
Languages: Python, Matlab, C/C++, Java, VHDL, SystemVerilog and LaTeX
Technologies: Robotics, Computer Vision, Signal Processing, Linux, Docker, Github, Digital Electronics, Embedded Systems, FPGAs and Computer-aided design