(+98) 911-922-1002
amirhosein.toosi@gmail.com
LinkedIn/AmirhoseinToosi
Google Scholar
GitHub/Amirhosein2c

Amirhosein Toosi Ph.D.

Summary

Accomplished applied AI scientist & senior computer vision engineer, expert in various domains including embedded AI and medical image processing. Contributed to cutting edge AI research in healthcare at Microsoft, UBC Radiology, and BC Cancer Research Institute. Proven track record in developing innovative solutions in robotics & medical VR simulators.

Work Experience

DynamSoft | Senior Computer Vision Engineer Vancouver | 2025.02 - 2025.06
- Developed advanced deep learning-based solutions for scanned documents' quality enhancement, as part of a document scanning SDK.
- Employed state-of-the-art methods for data generation and model design, train, distillation, and compression, to perform real-time Document Shadow Removal and Document Unwarping on mobile devices.

BC Cancer Research Institute | Research Programmer Vancouver | 2024.06 - 2025.02
- Performed research and developed advanced AI-based 3D biomedical image processing solutions aiming at diagnosis and prognosis of multiple types of cancer namely, prostate cancer, head and neck cancer, lung cancer, melanoma, and lymphoma.

Microsoft | Postdoc Researcher - AI for Good Lab Seattle, WA | 2024.01 - 2025.02
- Developed state-of-the-art AI-based techniques for automated lesion detection and segmentation on PSMA PET/CT images of prostate cancer patients.
- Employed cutting-edge generative AI techniques such as diffusion-based models in PSMA SPECT/CT projections interpolation in order to decrease the long scan time and minimize cancer patients discomfort.

University of British Columbia | Postdoc Research Fellow Vancouver | 2024.01 - 2025.02
- Conducted advanced AI-driven analysis of radiomolecular imaging modalities such as PET-CT and SPECT-CT images for prostate cancer diagnosis and prognosis.
- Introduced a novel AI-based segmentation-free method for head and neck cancer patients outcome prediction.

BC Cancer Research Institute | Postdoc Research Fellow Vancouver | 2021.11 - 2023.12
- Led various AI-based 3D biomedical image processing projects for multiple types of cancers.

Abinsula | Computer Vision & Deep Learning Engineer Turin, Italy | 2019.08 – 2021.10
- Designed and implemented embedded DL-based stereo vision systems for human collision avoidance for forklifts in warehouses.
- Developed an embedded DL-based Driver Distraction Inhibition system for automotive industry.
- Built 3D graphics engine for developing an android GPS tracking app for online agriculture fleet tracking.
- Performed research and developed multiple deep learning-based applications for precise agriculture using UAVs and drones.

Polytechnic University of Turin | Postdoc Researcher Turin, Italy | 2018.05 – 2019.08
- Worked on developing an AI-based multi-view 3D human pose estimation and tracking for the purpose of sports events analysis using state-of-the-art deep learning-based detection, tracking, and pose estimation algorithms.

AFACO Group | Robotics Software Developer Tehran, Iran | 2011.07 - 2014.12
- Developed and maintained the main controlling, data acquisition, video capturing, and reporting software for multiple CCTV sewer inspection robotic systems.

Education

Polytechnic University of Turin — Turin, Italy
PhD. in Computer and Control Engineering — 2014.12 - 2018.07

Qazvin Azad University — Qazvin, Iran
MSc. in Mechatronics Engineering — 2010.09 - 2013.09

Skills

Programming languages/scripts: `Python`, `C/C++`, `JS`, `MATLAB`, `bash`, `C#`.
ML frameworks: `PyTorch`, `TensorFlow/TensorRT`, `ONNX`, `OpenMMLab`.
Computer Vision: `OpenCV`, `Scikit-image`, `Scipy`, `ffmpeg`.
Computer Graphics: `OpenGL`, `glsl`, `WebGL`, `Threejs`.
Medical Image Processing: `SimpleITK`, `PyDICOM`, `Nibabel`, `MONAI`.
Other Tools: `Git`, `Azure`, `Docker`, `Obsidian`, LaTeX.