Dr. Farshid Pirahansiah

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About Me

Lead Researcher in Computer Vision and Image Processing With more than 7+ years of experience in computer vision and large language models, I have gained extensive expertise through roles in multinational companies across two continents. My academic background includes a PhD and a Master's degree in Computer Science, with a focus on Computer Vision, as well as a Bachelor's degree in Software Engineering. My expertise extends to areas such as Machine Learning in Vision, including Object Detection and Video Tracking, as well as IoT, Medical Imaging, and Robotics. I am skilled in designing algorithms for Image Analysis and have a track record of developing robust solutions and writing high-quality code using OpenCV, TensorFlow, and PyTorch. Additionally, I have contributed several patents, books, and papers in the field of computer vision.

Work Experience

(over 2.5 years) 01/08/2021 - Present: Alcon, Teltow, Germany

Technical Lead, R&D in Image Processing (Medical Devices)

- Lead the R&D team in software development for medical imaging.
- Focus on real-time data processing, mining, and visualization for ophthalmology tools.
- Develop medical software for native and web platforms.
- Handle technical specification and prototype design.
- Key technologies: Python, C++, MATLAB, GPU.

(over 1.5 years) 22/09/2019 - 30/05/2021: Tier Mobility GmbH, Berlin, Germany

Computer Vision Research Engineer

- Engaged in computer vision projects using deep learning in IoT environments.
- Specialized in object and people tracking, GDPR compliance.
- Worked with various hardware like Raspberry Pi, Intel Neural Compute Stick, Nvidia Jetson.
- Developed an AWS-based pipeline for pedestrian density detection using PyTorch.

(over 3 years) 20/06/2016 - 15/09/2019: MIMOS Berhad, Kuala Lumpur, Malaysia

Senior Researcher

- Focused on deep learning applications in security and analytics.
- Developed methods using TensorFlow and other deep learning frameworks.
- Patented a facial analysis-based advertisement system.

(over 3 years) 31/08/2012 - 31/01/2015: National University of Malaysia

PhD Fellow

- Worked on license plate detection using C++ and OpenCV.
- Served as a teaching and lab assistant in AI and Computer Vision.
- Published tutorials and papers in computer vision.

Education and Training

PhD in Computer Science

- National University of Malaysia, 2011 - 2017
- 3D SLAM, humanoid robot, camera calibration

Master in Computer Science

- National University of Malaysia, 2009 - 2011
- OCR, Thresholding, image segmentation

BS in Software Engineering

- Azad University, Tafresh, 2006 - 2008
- robotics

Skills

- **Python**, **C++**
- **OpenCV**
- LLMs
- Git, PyTorch, Deep Learning Frameworks
- IoT, Raspberry Pi, NVIDIA Jetson
- Operating Systems: Windows, MacOS, Linux
- Containerization: Docker
- Cloud: Amazon Web Services (AWS)
- Strong Teamwork and Leadership Abilities

Patents and Publications

- **Patents**: A METHOD FOR AUGMENTING A PLURALITY OF FACE IMAGES - 2021
  - The present invention relates to a method for increasing data for face analysis in video surveillance.
  - WO2021060971A1
- **Patents**: A METHOD FOR DETECTING A MOVING VEHICLE - 2021
  - The present invention relates to a method for detecting a moving vehicle.
  - WO2021107761
- **Patents**: System and method for providing advertisement contents based on facial analysis - 2020
  - Invented an algorithm, methods, and system for advanced facial attribute detection, leading to improvements in advertising systems.
  - WO2020141969A2 WIPO (PCT)
- **Book Chapter**: Camera Calibration and Video Stabilization for Robot Localization, Springer, 2021.
- Authored over 16 publications in books, journals, and conferences globally.