Amir Etefaghi Daryani

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Summary

Computer Vision and Machine Learning researcher with 3+ years of experience in deep learning, generative AI, multi-view detection, object tracking, and semantic scene understanding. Highly motivated, consistent, and committed to conducting rigorous research both independently and in collaborative environments, with a focus on solving real-world perception challenges. Published in CVPR and IEEE journals. Skilled in designing robust, real-time AI systems for autonomous navigation and smart agriculture. Seeking research or applied AI roles in computer vision and robotics.

Education

Ph.D., University of Florida GPA: 3.95
Agricultural and Biological Engineering
Supervisor: Prof. Henry Medeiros

M.Sc., Amirkabir University of Technology GPA: 3.65
Electrical Engineering
Supervisor: Prof. Saeed Sharifian

B.Sc., University of Guilan GPA: 3.88
Electrical Engineering
Supervisor: Prof. Reza PR Hasanzadeh

Experience

Graduate Research Assistant, University of Florida May 2023 – Present

CLASP – Correlating Luggage and Specific Passengers

- Developed a real-time video analytics pipeline to track passenger-luggage correlation in cluttered environments.

Technologies: Python, PyTorch, CUDA, HiPerGator

CaMuViD – Calibration-Free Multi-View Detection

- Designed a multi-view object detection framework that operates directly in image space without BEV or calibration.

Technologies: Python, PyTorch, CUDA, HiPerGator

ViLAD – Video-based Lettuce Association and Detection

- Created a dual-view model to associate lettuce plants over time for precision agriculture automation.

Technologies: Python, PyTorch, CUDA, HiPerGator

Computer Vision Researcher (Independent) May 2021 – Jun 2022

E2F-GAN – Eyes-to-Face Inpainting

- Reconstructed missing face regions from periocular features using edge-aware coarse-to-fine GANs.

Technologies: Python, TensorFlow, CUDA

IRL-Net – Inpainted Region Localization

- Built an attention-based network to detect tampered image regions produced by advanced inpainting methods.

Technologies: Python, TensorFlow, CUDA

Graduate Student, Digital Systems Lab, Amirkabir University of Technology Sept 2019 – June 2022

AdaInNet – Adaptive Inference Engine for IoT-Fog

- Proposed a reinforcement learning-based method to dynamically select a subset of DNN layers for inference, reducing network costs and inference delay on IoT devices.
- Addressed limitations in deploying full DNNs on resource-constrained IoT environments by leveraging partial execution strategies.

Technologies: Python, C++, TensorFlow, CUDA

Publications

- **A. Etefaghi Daryani**, H. Medeiros, *CaMuViD: Calibration-Free Multi-View Detection*, CVPR 2025.
- **A. Etefaghi**, H. Medeiros, *ViLAD: Video-based Lettuce Association and Detection*, (To be submitted).
- **A. Etefaghi Daryani** et al., *IRL-Net: Inpainted Region Localization via Spatial Attention*, IEEE Access, 2023.
- A. Hassanpour, SA. Mousavi Mobarakeh, **A. Etefaghi Daryani**, R. Ramachandra, B. Yang, *Synthetic Face Generation via Eyes-to-Face Inpainting*, IJCB, 2023.
- **A. Etefaghi Daryani**, S. Sharifian, *AdaInNet: RL-Based DNN Offloading for IoT-Fog*, Journal of Supercomputing, 2023.
- A. Hassanpour, **A. Etefaghi Daryani**, M. Mirmahdi, K. Raja, B. Yang, C. Busch, J. Fierrez, *E2F-GAN: Edge-Aware Coarse-to-Fine GANs*, IEEE Access, 2022.

Soft Skills

- Conduct independent and collaborative research with precision and critical thinking.
- Highly consistent and organized in long-term project execution and documentation.
- Self-motivated to explore new research directions and overcome technical challenges.
- Deeply committed to team goals and interdisciplinary collaboration.

Technical Skills

Languages: Python, R, C++, MATLAB
Deep Learning: PyTorch, TensorFlow, scikit-learn
Tools: Git, Docker, CUDA
Databases: SQL

Honors and Awards

Top Up Fellowship – $2,000 July 2024
Awarded for academic excellence and research performance.

Grinter Fellowship – $2,000 (Fall/Spring) July 2023
Grinter Fellowship – $1,000 (Summer) April 2023
Recognized for exceptional performance as a graduate student in engineering.

References

Prof. Henry Medeiros — University of Florida <hmedeiros@ufl.edu>
Prof. Changying (Charlie) Li — University of Florida <cli2@ufl.edu>