

# Amir Etefaghi Daryani

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<https://amiretefaghi.github.io/>

## Summary

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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

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<b>Ph.D., University of Florida</b> Agricultural and Biological Engineering Supervisor: Prof. Henry Medeiros	GPA: 3.95
<b>M.Sc., Amirkabir University of Technology</b> Electrical Engineering Supervisor: Prof. Saeed Sharifian	GPA: 3.65
<b>B.Sc., University of Guilan</b> Electrical Engineering Supervisor: Prof. Reza PR Hasanzadeh	GPA: 3.88

## Experience

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<b>Graduate Research Assistant, University of Florida</b> <b>CLASP</b> – Correlating Luggage and Specific Passengers <ul style="list-style-type: none"><li>Developed a real-time video analytics pipeline to track passenger-luggage correlation in cluttered environments.</li></ul> <b>Technologies:</b> Python, PyTorch, CUDA, HiPerGator <b>CaMuViD</b> – Calibration-Free Multi-View Detection <ul style="list-style-type: none"><li>Designed a multi-view object detection framework that operates directly in image space without BEV or calibration.</li></ul> <b>Technologies:</b> Python, PyTorch, CUDA, HiPerGator <b>ViLAD</b> – Video-based Lettuce Association and Detection <ul style="list-style-type: none"><li>Created a dual-view model to associate lettuce plants over time for precision agriculture automation.</li></ul> <b>Technologies:</b> Python, PyTorch, CUDA, HiPerGator	May 2023 – Present
<b>Computer Vision Researcher (Independent)</b> <b>E2F-GAN</b> – Eyes-to-Face Inpainting <ul style="list-style-type: none"><li>Reconstructed missing face regions from periocular features using edge-aware coarse-to-fine GANs.</li></ul> <b>Technologies:</b> Python, TensorFlow, CUDA <b>IRL-Net</b> – Inpainted Region Localization <ul style="list-style-type: none"><li>Built an attention-based network to detect tampered image regions produced by advanced inpainting methods.</li></ul>	May 2021 – Jun 2022

**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

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- **A. Etefaghi**, 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 et al., *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 et al., *E2F-GAN: Edge-Aware Coarse-to-Fine GANs*, IEEE Access, 2022.

## Soft Skills

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- 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

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**Languages:** Python, R, C++, MATLAB

**Deep Learning:** PyTorch, TensorFlow, scikit-learn

**Tools:** Git, Docker, CUDA

**Databases:** SQL

## Honors and Awards

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**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

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Prof. Henry Medeiros — University of Florida <hmedeiros@ufl.edu>

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