Matías Andrés Mendieta

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Education

Ph.D. Computer Science *Aug. 2021 – Present*
University of Central Florida
Advisor: Dr. Chen Chen, GPA: 4.0/4.0
Transfer with advisor from the University of North Carolina at Charlotte
Ph.D. in Electrical Engineering, Aug. 2020 – July 2021

M.S. Electrical Engineering *May 2019 – May 2020*
University of North Carolina at Charlotte
Advisor: Hamed Tabkhi, GPA: 4.0/4.0

B.S. Computer Engineering *Aug. 2016 – May 2019*
University of North Carolina at Charlotte
GPA: 3.96/4.0

Experience

Professional

Machine Learning Intern *May 2023 – Aug. 2023*
Apple Cupertino, CA
Investigated generative AI methods for image and video inpainting.

Applied Scientist Intern *May 2022 – Nov. 2022*
Amazon AWS Santa Clara, CA
Conducted computer vision research in self-supervised learning for geospatial foundation models.

Software Engineer Intern *May 2018 – Aug. 2018*
IBM Durham, NC
Designed, integrated, and tested full proxy functionality for a SASP load balancer simulator.

Academic

Graduate Research Assistant *Aug. 2021 – Present*
Center for Research in Computer Vision, UCF Orlando, FL
Investigating resource and label efficient deep learning methods for computer vision and federated learning.

Graduate Research and Teaching Assistant *June 2019 – July 2021*
Electrical and Computer Engineering, UNC Charlotte Charlotte, NC
Developed real-time computer vision algorithms for autonomous systems and taught weekly recitations for courses.

Undergraduate Research Assistant *June 2017 – May. 2019*
Media Laboratory, UNC Charlotte Charlotte, NC
Conducted acoustic metamaterials research with the NSF Center for Metamaterials and Harris Corporation.

Selected Publications

M. Mendieta, B. Han, X. Shi, Y. Zhu, C. Chen
Towards Geospatial Foundation Models via Continual Pretraining
ICCV, 2023.

J. Luo, **M. Mendieta**, C. Chen, S. Wu
PGFed: Personalize Each Client's Global Objective for Federated Learning
ICCV, 2023 **Oral**.

G. Sun, **M. Mendieta**, J. Luo, S. Wu, C. Chen
FedPerfix: Towards Partial Model Personalization of Vision Transformers in Federated Learning
ICCV, 2023.

C. Zheng, **M. Mendieta**, C. Chen
POSTER: A Pyramid Cross-Fusion Transformer Network for Facial Expression Recognition
ICCV AMFG Workshop, 2023.

C. Zheng, **M. Mendieta**, T. Yang, G. Qi, C. Chen
FeatER: An Efficient Network for Human Reconstruction via Feature Map-Based TransformER
CVPR, 2023.

M. Mendieta, T. Yang, P. Wang, M. Lee, Z. Ding, C. Chen
Local Learning Matters: Rethinking Data Heterogeneity in Federated Learning
CVPR, 2022 **Best Paper Finalist**.

C. Zheng, **M. Mendieta**, P. Wang, A. Lu, C. Chen
A Lightweight Graph Transformer Network for Human Mesh Reconstruction from 2D Human Pose
ACM Multimedia, 2022.

T. Yang, S. Zhu, **M. Mendieta**, P. Wang, R. Balakrishnan, M. Lee, T. Han, M. Shah, C. Chen
MutualNet: Adaptive ConvNet via Mutual Learning from Different Model Configurations
IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021.

M. Mendieta and H. Tabkhi
CARP^e Posterum: A Convolutional Approach for Real-time Pedestrian Path Prediction
AAAI, 2021.

C. Zheng, S. Zhu, **M. Mendieta**, T. Yang, C. Chen, Z. Ding
3D Human Pose Estimation with Spatial and Temporal Transformers
ICCV, 2021.

A. George, A. Ravindran, **M. Mendieta** and H. Tabkhi
Mez: An Adaptive Messaging System for Latency-Sensitive Multi-Camera Machine Vision at the IoT Edge
IEEE Access, 2021.

C. Neff*, **M. Mendieta***, S. Mohan, M. Baharani, S. Rogers, and H. Tabkhi
REVAMP^{2}T: Real-time Edge Video Analytics for Multi-camera Privacy-aware Pedestrian Tracking
IEEE Internet of Things Journal (IoT-J) Special Issue on Privacy and Security in Distributed Edge Computing and Evolving IoT, 2020. * Equal Contribution

M. Mendieta, C. Neff, D. Lingerfelt, C. Beam, A. George, S. Rogers, A. Ravindran, and H. Tabkhi
A Novel Application/Infrastructure Co-design Approach for Real-time Edge Video Analytics
In IEEE SoutheastCon, 2019.

Patents

Detection of Genuine Social Media Profiles *Dec. 2018*
Affiliation: IBM — Publication Number: 20200186539
A method, system and computer program product for performing the detection of genuine social media profiles.

Customizing Product Announcements Based on Product Usage *Nov. 2018*
Affiliation: IBM — Publication Number: 20200143385
A computer-implemented method that includes tracking usage history of a plurality of components of products.

Skills and Academic Service

Programming Languages, Frameworks, and Tools: Python, PyTorch, C/C++, MATLAB

Conference Reviewer: CVPR, ICCV, ECCV, ICME, DAC

Journal Reviewer: IoT-J, IJCNC