Neehar Peri

neeharperi.com

contact@neeharperi.com
(732) 325-4663

Education

Ph.D in Robotics, Carnegie Mellon University August 2021 - Present

B.S. in Computer Engineering, University of Maryland - College Park August 2017 - May 2021
QUEST Honors Program

Conference Publications

- A Synthesis-Based Approach for Thermal-to-Visible Face Verification — Under Review
  ***N Peri**, J Gleason, CD Castillo, T Bourlai, VM Patel, R Chellappa*
- PreferenceNet: Encoding Human Preferences in Auction Design with Deep Learning — Under Review
  N Peri, MJ Curry*, S Dooley, JP Dickerson*
- Deep k-NN Defense against Clean-label Data Poisoning Attacks — ICMLW 2020, ECCVW 2020
  N Peri, N Gupta*, WR Huang*, L Fowl, C Zhu, S Feizi, T Goldstein, JP Dickerson*
- The Devil is in the Details: Self-Supervised Attention for Vehicle Re-ID — ECCV 2020
  P Khorramshahi, **N Peri***, JC Chen, R Chellappa*
- Towards Real-Time Systems for Vehicle Re-ID, Multi-Camera Tracking, and Anomaly Detection — CVPRW 2020†
  N Peri, P Khorramshahi*, SS Rambhatla*, V Shenoy, S Rawat, JC Chen, R Chellappa*
- Attention Driven Vehicle Re-ID and Unsupervised Anomaly Detection for Traffic Understanding — CVPRW 2019†
  *P Khorramshahi, **N Peri**, A Kumar, A Shah, R Chellappa*
- A Dual Path Model with Adaptive Attention for Vehicle Re-ID — ICCV 2019††
  *P Khorramshahi, A Kumar, **N Peri**, SS Rambhatla, JC Chen, R Chellappa*

*Equal Contribution
†Selected for Spotlight Presentation
††Selected for Oral Presentation

Academic Experience

Carnegie Mellon University, Pittsburgh, PA, *Robotics Institute* *Apr 2020 – Present*

- Leading research on 3D object detection, tracking, and forecasting for autonomous driving applications
- Advisor: Deva Ramanan

University of Maryland, College Park, MD, *UMIACS* *May 2018 – May 2021*

- Conducted research in traffic analytics for unsupervised anomaly detection and discriminative representation learning for vehicle re-identification
- Led research in defending against clean-label adversarial poisoning attacks
- Established novel method for encoding human preferences in revenue maximizing auction design
- Advisors: Rama Chellappa & John P. Dickerson

Industry Experience

MUKH Technologies, College Park, MD, *Research Intern* *Aug 2020 – Present*

- Leading researcher on improving thermal-to-visible face synthesis for zero-shot identitification
- Building robust face verification pipelines for multi-spectral data streams

ArgoAI, Pittsburgh, PA, *Research Intern* *May 2021 – August 2021*

- Developed end-to-end 3D object detection and forecasting pipeline from LiDAR point clouds
- Implemented novel metrics that jointly evaluate the detection and forecasting accuracy

Bank of America, Charlotte, NC, *Conversational Commerce Technology Intern* *Jun 2019 – Aug 2019*

- Developed novel deep learning pipeline to validate quality of utterance-intent pairs in chatbot conversations using PyTorch, AllenNLP, and NLTK
- Deployed RESTful Active Learning API to introduce targeted learning feedback loop and improve intent classification model performance

Teaching Experience

University of Maryland, ECE Department, *Undergraduate Teaching Fellow* *Jan 2019 – May 2019*

- Led Introduction to Digital Logic recitation for a discussion section of 15 students
- Received highest marks on metrics of preparedness, respect for students, and teaching effectiveness from all students

Awards

Maryland Undergraduate Researcher of the Year	*2021*
Sujan Guha Memorial Best Senior Thesis Award	*2021*
CRA Outstanding Undergraduate Researcher (Honorable Mention)	*2021*
NSF Graduate Research Fellowship (Honorable Mention)	*2021*

Service

Reviewer: NeurIPS 2021