

# Neehar Peri

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(732) 325-4663

## EDUCATION

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**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

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- [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](#) 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<sup>†</sup>  
*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<sup>†</sup>  
*P Khorramshahi, N Peri, A Kumar, A Shah, R Chellappa*
- [A Dual Path Model with Adaptive Attention for Vehicle Re-ID](#) ICCV 2019<sup>††</sup>  
*P Khorramshahi, A Kumar, N Peri, SS Rambhatla, JC Chen, R Chellappa*

\*Equal Contribution

<sup>†</sup>Selected for Spotlight Presentation

<sup>††</sup>Selected for Oral Presentation

## ACADEMIC EXPERIENCE

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**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

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**MUKH Technologies**, College Park, MD, *Research Intern*

Aug 2020 – Present

- Leading researcher on improving thermal-to-visible face synthesis for zero-shot identification
- 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

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**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

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Maryland Undergraduate Researcher of the Year *2021*

Sujan Guha Memorial Best Senior Thesis Award *2021*

CRA Outstanding Undergraduate Researcher (Honorable Mention) *2021*

## SERVICE

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**Reviewer:** NeurIPS 2021