Negar Nejatishahidin

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Education

George Mason University, **Sep. 2019 – May 2024**
Doctor of Philosophy in Computer Science *GPA : 3.85/4*

George Mason University, **Sep. 2019 – May 2022**
Master of science in Computer Science *GPA : 3.85/4*

Publications

Object Pose Estimation using Mid-level Visual Representations (IROS 2022)

- IEEE/RSJ International Conference on Intelligent Robots and Systems.
- ***N. Nejatishahidin**, P. Fayyazsanavi, J. Kosecka*

Graph-CoVis: GNN-based Multi-view Panorama Global Pose Estimation (CVPRW 2023)

- OmniCV workshop at IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR).
- Best paper award.
- ***N. Nejatishahidin**, Zillow Group*

Fingerspelling PoseNet:Enhancing Fingerspelling Translation with Pose-Based Transformer Models (WACV 2024)

- WVLL workshop at IEEE/CVF Winter Conference on Applications of Computer Vision (WACV).
- *P. Fayyazsanavi, **N. Nejatishahidin**, J. Kosecka*

Technical Skills & Research Interests

Programming Languages: Python, R, C/C++, Java, MATLAB, SQL
Technologies-Frameworks: Pytorch, Tensorflow, AWS, Spark, Pytorch3d, OpenCV, Open3D, Scikit-learn, SciPy, Pandas, Keras, Numpy, Docker, Tableau.
Models: CNNs, RNNs, GNNs, Transformers, GANs, Logistic regression, Ridge Lasso regression, Ensemble learning, Random Forest , ANN, SVM, Naïve Bayes, K-means clustering, and PCA.
Research Interests: Data Science, Data Mining, Data Analysis, Machine Learning, Computer Vision.

Professional Experiences

Humane, **May. 2023 – Aug. 2023**
Computer vision research intern.
Supervised by Joseph Cheng.

Zillow Group, **May. 2022 – Dec 2022**
Computer vision research intern.
Supervised by Sing Bing Kang.

Projects

Multi-modal 3D scene understanding **Jan. 2023 – Present**

- Referring Expression Comprehension.

Hand Tracking **May. 2022 – Aug 2023**

- Estimating the 3D pose of the hand.

Camera Localization **May. 2022 – Jan 2023**

- Estimating global pose of camera for panorama images.
- Evaluating on Zillow Indoor Dataset. GNN based approach.

Object Pose Estimation **May. 2020 – Sep. 2021**

- Designed the state-of-the-art model for the pose classification task on the Pix3D dataset.
- Introduced a new object pose annotation benchmark on the Active Vision Dataset.
- Developed a transferable course-to-fine manner model for object pose estimation.

Pointcloud completion **Oct. 2021 – May. 2022**

- Transformer based model for completing the missing depth and geometry information in partial pointclouds.
- Experiencing point-net style architecture and pointcloud representation.

Depth Completion **Nov. 2020 – May. 2021**

- Designed a method to use surface normal, semantics, and geometric information for depth completion.

Object Detection **Feb. 2020, Apr. 2020**

- Implemented the YOLO object detection. Trained with the CFAR dataset.

Image Captioning **Sep. 2017 – Feb. 2018**

- Designed an end-to-end encoder-decoder model for image captioning tasks.