Li, Mengtian

✉ mtli@cs.cmu.edu   🌐 mtli.github.io

EDUCATION

Ph.D. in Robotics   Aug 2017 – May 2022
School of Computer Science, **Carnegie Mellon University**   *Pittsburgh, USA*
Advisor: Deva Ramanan
Thesis: Resource-Constrained Learning and Inference for Visual Perception
Committee: Deva Ramanan, Martial Hebert, Mahadev (Satya) Satyanarayanan,
         Raquel Urtasun and Ross Girshick

M.S. in Robotics   Aug 2014 – Aug 2016
School of Computer Science, **Carnegie Mellon University**   *Pittsburgh, USA*
Advisor: Daniel Huber
GPA: 4.05/4.00

B.S. in Computer Science   Mar 2010 – Jun 2014
Kuang Yaming Honors School, **Nanjing University**   *Nanjing, China*

PUBLICATIONS & PREPRINTS

Mengtian Li, Yu-Xiong Wang and Deva Ramanan. *Towards Streaming Perception*. In ECCV, Aug 2020 (**Oral, Best Paper Honorable Mention**).

Chittesh Thavamani***, Mengtian Li***, Nicolas Cebron and Deva Ramanan. *FOVEA: Foveated Image Magnification for Autonomous Navigation.* In ICCV, Oct 2021.

Mengtian Li, Ersin Yumer and Deva Ramanan. *Budgeted Training: Rethinking Deep Neural Network Training Under Resource Constraints*. In ICLR, Apr 2020.

Mengtian Li, Alexander Shekhovtsov and Daniel Huber. *Complexity of Discrete Energy Minimization Problems*. In ECCV. Oct 2016 (**Spotlight**).

Mengtian Li, Laszlo Jeni and Deva Ramanan. *Brute-Force Facial Landmark Analysis with a 140,000-Way Classifier*. In AAAI. Feb 2018.

Mengtian Li, Zhe Lin, Radomír Měch, Ersin Yumer and Deva Ramanan. *Photo-Sketching: Inferring Contour Drawings from Images*. In WACV, Jan 2019.

Neehar Peri, Jonathon Luiten, **Mengtian Li**, Aljosa Osep, Laura Leal-Taixé and Deva Ramanan. *Forecasting from LiDAR via Future Object Detection.* (To appear) in CVPR, Jun 2022.

Xiaofang Wang, Shengcao Cao*, **Mengtian Li*** and Kris M Kitani. *Neighborhood-Aware Neural Architecture Search.* In BMVC, Nov 2021.

Mengtian Li, Benjamin Wilson, Yu-Xiong Wang, James Hays and Deva Ramanan. *Multi-Range Pyramids for 3D Object Detection.* (Under review), 2022.

Ziqi Pang, Deva Ramanan, **Mengtian Li**, Yu-Xiong Wang. *Towards Online Forecasting.* (Under review), 2022.

Shubham Gupta*, Jeet Kanjani*, **Mengtian Li**, Francesco Ferroni, James Hays, Shu Kong and Deva Ramanan. *Far3Det: Towards Far-Field 3D Detection.* (Under review), 2022.

Shengcao Cao, **Mengtian Li**, James Hays, Deva Ramanan and Liangyan Gui. *Learning Lightweight Object Detectors via Progressive Knowledge Distillation.* (Under review), 2022.

PROFESSIONAL SERVICE

- Co-organized the 1st Streaming Perception Challenge at CVPR 2021 Workshop on Autonomous Driving
- Conference reviewer for CVPR, ICCV, ECCV, NeurIPS, ICRA
- Journal reviewer for IEEE TPAMI, IJCV, IEEE Transactions on Multimedia, IEEE Transactions on Image Processing, Autonomous Robots, Neural Networks
- Teaching assistant for 16-822 Geometry-based Methods in Vision (Fall 2019) at Carnegie Mellon University
- Teaching assistant for 16-720 Computer Vision (Spring 2020) at Carnegie Mellon University

RESEARCH INTERNSHIPS

Argo AI, Pittsburgh, USA   May 2020 – Aug 2020
Mentor: Deva Ramanan
- Streaming perception for autonomous driving

Argo AI, Pittsburgh, USA   May 2019 – Aug 2019
Mentor: Deva Ramanan
- Evaluation method for attentional processing

Argo AI, Pittsburgh, USA   May 2018 – Aug 2018
Mentors: Deva Ramanan and Ersin Yumer
- Hard example simulation and mining for self-driving cars

Adobe Research, San Jose, USA   May 2017 – Aug 2017
Mentors: Radomír Měch, Zhe Lin and Ersin Yumer
- Image to sketch translation and large-scale data collection through drawing games

SELECTED HONORS AND SCHOLARSHIPS

- ECCV Best Paper Honorable Mention Award   Aug 2020
- National Top Student Program Scholarship (3 times)   Nov 2011, 2012, 2013
- Microsoft China Kinect App Contest Excellence Award (National Top 10)   Mar 2013
- COMAP MCM/ICM Contest Meritorious Award   Apr 2013
- UCLA CSST Summer Research Program Scholarship   Mar 2013
- University People's Scholarship   Nov 2011

PATENT

Mengtian Li, Ming Pang, Chenglin Meng, Chengxiang Jiang and Tong Lu. *A Vision-Based Human-Computer Interaction System in the Presentation Environment*. Chinese Invention Patent. Publication Number: *CN103268153*. Granted July 2016.

SKILLS

- Proficient in C/C++, Python and MATLAB
- Experienced with x86 assembly, JavaScript, HTML, CSS, OpenMP, OpenCV, DirectX, Win32 API, MFC, Kinect SDK, Batch File, Bash/Shell Script
- Experienced with large-scale data collection, annotation, and curation
- Experienced with large-scale distributed training and Amazon Web Services (AWS) such as EC2, S3 and AMT
- Experienced with interactive Web and desktop UI development
- Experienced with open-source project development and packaging
- Developed a generic monitoring tool for GPU clusters, which has been deployed at top universities such as CMU, UC Berkeley, UT Austin and RWTH Aachen
- Mentored 1 undergraduate, 4 master and 1 junior PhD students
- Adept in Microsoft Office Suite and Adobe Creative Cloud