

Liyan Chen

Web: <https://lly00412.github.io/>

Email : lchen39@stevens.edu

Mobile : +1-(201)9146333

Education

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| • Stevens Institute of Technology (SIT)
<i>Ph.D. in Computer Science</i> | Hoboken, NJ
01/2020 - Present |
| • Stevens Institute of Technology (SIT)
<i>M.S. in Information and Data Engineering</i> | Hoboken, NJ
08/2017 - 05/2019 |
| • Renmin University of China (RUC)
<i>B.A. in Mathematics</i> | Beijing, China
09/2012 - 07/2016 |

Research Interests

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| • Uncertainty Estimation with Computer Vision | • Robotic Perception |
| • Multi-View 3D Reconstruction | • Active Vision |
| • Semantic Mapping | • Machine Learning |

Awards

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| • AWS Machine Learning Research Awards (Prize with Sergül Aydıre) | 08/2019 |
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Publications

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- **ActiveGAMER: Active GAussian Mapping through Efficient Rendering**
Liyan Chen, Huangying Zhan, Kevin Chen, Xiangyu Xu, Qingan Yan, Changjiang Cai, Yi Xu
CVPR 2025, Nashville, USA.
 - **Learning the Distribution of Errors in Stereo Matching for Joint Disparity and Uncertainty Estimation**
Liyan Chen, Weihang Wang, Philippos Mordohai
CVPR 2023, Vancouver, Canada.
 - **DropCluster: A Structured Dropout for Convolutional Networks**
Liyan Chen, Philip Gautier, Sergül Aydıre
(Oral) Women in Machine Learning workshop in NeurIPS 2019, Vancouver, Canada.

Invited Talks

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- **Learning the Distribution of Errors in Stereo Matching for Joint Disparity and Uncertainty Estimation**
NYC Computer Vision Day 2025, New York, USA
 - **DropCluster: A Structured Dropout for Convolutional Networks**
Women in Machine Learning workshop in NeurIPS 2019, Vancouver, Canada

Professional Experiences

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| • InnoPeak Technology
<i>Internship</i> <ul style="list-style-type: none">◦ Conducted collaborative research with other senior research staff and interns to design an advanced active mapping system for both geometric and photometric reconstruction. | Palo Alto, USA
05/2024 - 08/2025 |
| • ANBOUND Research Center
<i>Internship</i> | Beijing, China
06/2016 - 10/2016 |

- Carried out several consulting projects, including analysis of energy market data and automotive industry data, and advice on adjustments of petroleum product of our customer.

- **National Library of China**

Beijing, China

Collaborating scholar

07/2015 - 05/2024

- Established the first comprehensive database for ancient documents from the National Library and five university libraries, and developed a framework to digitize, recognize rare characters, auto-classify topics, and simplify access for research and preservation.

- **National Laboratory of Data Engineering and Knowledge Engineering (RUC)**

Beijing, China

Research Assistant

08/2015 - 05/2016

- Contributed to the Shandong Open Data Project, conducted research on the design of open data applications and sharing platforms.

Professional Services

- **Teaching Assistant**

- EE551 Python Programing
- CS383 Computer Organization and Programming
- CS558 Computer Vision
- CS559 Machine Learning

- **Reviewer**

- CVPR 2024
- ECCV 2024
- CVPR 2025

- **Seminar Organizer**

- Advanced Machine Learning Seminar at SIT

- **Workshop Facilitator**

- WiML Un-Workshop at ICML 2021

Open-Source Contributions

- **SEDNet: Stereo Error Matching Network**

Official implementation of the SEDNet with GwcNet backbone published at CVPR 2023

- **FLAML: A Fast Library for Automated Machine Learning & Tuning**

Contribute to designing the pipeline for automatic hyperparameter tuning in knowledge distillation using Transformer-based architectures.

References

- **Dr. Philippos Mordohai**

Professor
Department of Computer Science
Stevens Institute of Technology
Email: pmordoha@stevens.edu

- **Dr. Sergül Aydıre**

Senior Applied Scientist
Amazon AI
Amazon Web Services
Email: sergulaydore@gmail.com

- **Dr. Enrique Dunn**

Associate Professor
Department of Computer Science
Stevens Institute of Technology
Email: edunn@stevens.edu