# Yijie Li

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## EDUCATION

**Beijing-Dublin International College, Beijing University Of Technology (BJUT)** 09/2019-07/2023

- Major: **Software Engineering** (Full English Teaching); Current GPA: **3.79/4.2**; **IELTS**: 6.5
- **Computer Skills**: Python, C/C++, Java, Pytorch, OpenCV, CUDA

## PUBLICATIONS

[1] Hewei Wang, **Yijie Li**, Shijia Xi, Shaofan Wang, Muhammad Salman Pathan, Soumyabrata DEV. **AMDCNet: An Attentional Multi-Directional Convolutional Network for Stereo Matching**, *Display*.

[2] Hewei Wang, **Yijie Li**, Bolun Zhu, Kaiwen Gong, Ziyuan Wen, Shaofan Wang, Soumyabrata Dev. **SYGNet: A SVD-YOLO based GhostNet for Real-time Driving Scene Parsing**, *29th IEEE International Conference on Image Processing (ICIP 2022)*.

[3] Hewei Wang, Kaiwen Gong, Shijia Xi, **Yijie Li**, Ziyuan Wen, Zixiao Ma, Muhammad Salman Pathan, Soumyabrata DEV. **Measuring Music Influence Using the Musician-Follower Relations**, *International Journal of Human - Computer Studies*, *Under Review*.

## PROJECT EXPERIENCE

**RA of Prof. Yongjin Liu's Research Group, Tsinghua University** 01/2022-Present

- Study Generative Adversarial Networks (GAN), focusing on image generation with style and image attribute editing and inversion. Current research topic is StyleGAN-based image attribute editing with attribute disentanglement.

**RA of Prof. Soumyabrata DEV's Research Group, University College Dublin** 01/2021-09/2021

**Project 1: "AMDCNet: An Attentional Multi-Directional Convolutional Network for Stereo Matching"**

- Contributed to proposing an attentional multi-directional convolutional network (AMDCNet) for circumventing some issues related to stereo matching.
- Tested the AMDCNet with standard images in the Middlebury test dataset, Scene Flow and KITTI 2015.
- Mainly responsible for evaluating the AMDCNet on the KITTI 2015 dataset and completing the comparative tests of Match Precision indexes.
- Concluded that the depth map output by AMDCNet has better depth estimation of details and higher accuracy compared with partial models of the same type.

**Project 2: "Measuring Music Influence Using the Musician-Follower Relations"**

- Built a model that measures musical influence by utilizing the data sets of musical characteristics and links between music influencers and followers.
- Constructed the Complex Social Network and Scale-free Network via mathematical modeling.
- Mainly responsible for the framework construction and relevant experiments of Cluster Analysis.

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**Project 3:** "**UCloudNet: A Residual U-Net with Deep Supervision for Cloud Segmentation"**

- Introduced a model for ground-based cloud segmentation by conducting several experiments.
- Designed the structure of UCLoudNet, performed different training configurations on data sets, and analyzed the performance of my proposed method.

**Project 4: "SYGNet: A SVD-YOLO based GhostNet for Real-time Driving Scene Parsing"**

- Participated in the experimental design, model training, and performance analysis; Evaluated the effect of GhostNet light-weight module of SYGNet.

**Project 5: "A simple deep learning system with numpy"** 03/2021-06/2021

- Developed a simple deep learning system with dynamic computation graph, including basic auto-grad, optimizers (Adam, SGD, etc.), and network layers (Linear, ReLU, Softmax, BatchNorm1d, etc.).

## PAPER REPRODUCTION

**Studied and reproduced nine foreign articles from scratch**

- ***Image Classification***
  - Very deep convolutional networks for large-scale image recognition
  - Deep residual learning for image recognition
  - MobileNets: Efficient convolutional neural networks for mobile vision applications
  - Densely connected convolutional networks
- ***Semantic Segmentation***
  - Fully convolutional networks for semantic segmentation
  - Pyramid scene parsing network
  - ICNet for real-time semantic segmentation on high-resolution images
  - Bisenet: Bilateral segmentation network for real-time semantic segmentation
- ***2D Object Detection***
  - YOLOv3: An incremental improvement
- ***Generative Adversarial Nets***
  - Conditional Generative Adversarial Nets