# YUE YANG

Email: yueyang.application@gmail.com ◇ Phone: +86 139-4023-5867
Personal Website: https://the-chosen.github.io/

## RESEARCH INTERESTS

AI applications in healthcare, Robotics, Cross-Modal Learning, Computer Vision, Data Mining

## EDUCATION

**Northeastern University, Shenyang, China** September 2017 - June 2021 (expected)
*BEng in Software Engineering (pivot class)*

- Average Score: 89.3/100 (WES score: 3.78/4.0)
- TOEFL Score: 105, GRE Score: 157(V) + 170(Q) + 4.0(AW)

**University of California San Diego, La Jolla, California** September 2019 - January 2020
*Exchange Student*

- Average Score: 4.0/4.0
- Courses: Practice of Data science (A), Modeling & Data Analysis (A), Introduction to Data Science (A)
- Audited class: Optimization, Computer Vision

## PUBLICATIONS & PREPRINTS

- Guangtao Zeng, Wenmian Yang, Zeqian Ju, **Yue Yang**, Sicheng Wang, Ruisi Zhang, Meng Zhou, Jiaqi Zeng, Xiangyu Dong, Ruoyu Zhang, Hongchao Fang, Penghui Zhu, Shu Chen, and Pengtao Xie, "MedDialog: A Large-scale Medical Dialogue Dataset", in EMNLP 2020 [paper link].
- **Yue Yang** and Pengtao Xie, "Discriminative Cross-Modal Data Augmentation for Medical Imaging Applications", in submission to a top conference [arxiv link].
- Xuehai He*, Xingyi Yang*, **Yue Yang**, Ruofan Guo, Yuxiao Liang, Shanghang Zhang, Li Du, and Pengtao Xie, "Supervised Pretraining or Self-supervised Pretraining? A Tale of Two Transfer Learning Paradigms", in submission to a top conference.
- **Yue Yang**, Jing Liang, and Jia Pan, "BCBSD: Anytime Bounded Conflicted-Based Algorithm for Dynamic Environments", in preparation.

## RESEARCH EXPERIENCE

**University of Hong Kong, Hong Kong, China** July 2020 - Present
*Research Assistant to Professor Jia Pan*

- Improved centralized multi-agent path finding by using accurate, decentralized perception of positions of dynamic obstacles and the algorithm is based on anytime and bounded CBS (in preparation).
- Funded by a computer science internship program of Hong Kong University.

**University of California San Diego, La Jolla, California** December 2019 - Present
*Research Assistant to Professor Pengtao Xie*

- Applied cross-modal methods on medical imaging based on CycleGAN, aiming to realize data augmentation across multiple modalities. 31.3% improvements can be seen. (submitted to one top conference).
- Studied the selection of pre-trained methods between supervised pre-training and self-supervised pre-training under different settings (i.e., domain difference, data amount, etc.) (submitted to one top conference).

*Equal Contribution

· Participated in the creation of the largest medical dialogue dataset to date (accepted by EMNLP2020).

**Northeastern University, Shenyang, China** December 2018 - August 2019
*Research Assistant to Professor Zheng Fang*

· Conducted laser data processing, and used behavioral cloning to improve automatic obstacle avoidance under some specific environments.
· Adopted max gap to implement reactive motion planning approaches, and compared it with traditional navigation stacks. The speed of robot could reach nearly 4.0 m/s under the complex environment.
· The research project was funded by National Innovation and Entrepreneurship Training Program for College Students and won 1st Prize in the NXP Cup National University Students Intelligent Car Race.

## PROFESSIONAL EXPERIENCE

**Water-Mirror, Shenzhen, China** September 2020 - Present
*Robotic Algorithm Engineer Intern*

· Developed anytime and bounded CBS algorithm that are applied to intelligent warehouse management, which can plan paths for up to 100 robots. The algorithm has much faster calculation speed($\approx 90\%$) and higher successful rate($\approx 50\%$) compared to traditional multi-agent path finding methods(e.g., CBS, WHCA*, etc.).
· Implemented the algorithm in Python and C++, and exposed an API to the company's system.

## OTHER PROJECTS

**Cross-Border E-Commerce Transaction Platform** July 2020 - August 2020
*Team project in collaboration with Neusoft Co., Ltd.*

· Constucted an online platform for commercial transactions between MVO, BVO and GVO. Multiple functions are implemented to ensure the online transaction, including product publishing, ordering, store management, logistics, etc.
· Designed and implemented the distributed micro-service architecture for back-end of the web application. Used Vue + Vuestic components to construct front-end of the web application.
· Cooperated on UI design, including static and dynamic prototype generation, and logo design.

**Web and Desktop Application of Hospital Information System (HIS)** June 2019 - July 2019
*Independent Project*

· Designed the database with MySQL to store information of medical staffs(e.g., doctors, therapist, etc.), cashiers and patients.
· Constructed the web application by using SpringBoot to design back-end, and using Vue to design front-end.
· Constructed the desktop application using JavaFX.

## AWARDS AND HONORS

1st Prize, The NXP Cup National University Students Intelligent Car Race, 2019

Second-Class Scholarship, Northeastern University (Top 5%), 2018 & 2019

2nd Prize, Jian Long Mathematical Modeling Competition, 2018

2nd Prize, National College Student English Competition, 2018

3rd Prize, Jian Long Mathematical Competition, 2018

3rd Prize, Asia and Pacific Mathematical Modeling Competition, 2017