YUE YANG

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EDUCATION

Northeastern University (Shenyang, China) *Sep. 2017 - Jun. 2021*
Bachelor of Engineering, Expected June 2021 Overall GPA: 3.963/5 (3rd / 60)
Major in Software Engineering (International, English) TOEFL: 97, CET6: 592

OTHER EXPERIENCE

Qualified to participate the Mitacs program supported by CSC Jun. 2020 - Sep. 2020
Research intern *Mitacs*

· Canceled due to the virus(COVID-19).

Being An Extension Student in UCSD Sep. 2019 - Jan. 2020
Exchange Student *University of California San Diego, La Jolla*

· Get grade A in all credit courses.
· Closely following 4 courses, including: Optimization, Computer Vision, Data science in practice and Modeling & Data Analysis.
· Join Pengtao's Lab.

INTERESTS & SKILLS

Reasearch Interests	Multimodal Learning, Graph Neural Networks, Reinforcement Learning, Computer Vision and Data Mining
Computer Languages	Python, Java, C/C++ and JavaScript
Labraries	PyTorch, Keras, NumPy, Pandas, Matplotlib, Sklearn and OpenCV3
Other Skills	LATEX, Linux(Ubuntu 16.04), experience of ROS, Matlab, Web development, Android development, PC development and Asynchronous Web Crawler

RESEARCH EXPERIENCE

Prof. Rui Liu's Group (Cognitive Robotics and AI Lab) Present
Research Assistant *Remote research*

· UAV Deployments using **graph neural networks(GNN)**.

Prof. Pengtao's Group Nov. 2019 - Present
Research Assistant *University of California San Diego, La Jolla*

· One **NIPS** paper is under writing.
· Doing **multi-task learning** on medical imaging. Aimed to realize data augmentation across multiple modalities. Now achieved around **24%** improvement on the validation loss.

Prof. Zheng Fang's Group (Intelligent Autonomous Robots Lab) Dec. 2018 - Aug. 2019
Research Assistant *Northeastern University, Shenyang*

· Get **1st** Prize in the NXP Cup National University Students Intelligent Car Race.
· Doing laser data processing and using the technique called **behaviour cloning** to train the robot.

· Make use of the max gap to implement **reactive navigation** approaches and comparing it with traditional navigation approaches.

PROJECT

Visual Tracking of Smart Car Based on AprilTag
Team Leader

Jul. 2019 - Aug. 2019
Northeastern University, Shenyang

· Adopted **AprilTag** to implement object detection in the video stream.
· Used a real-time global planner based on **Dijkstra Algorithm** to make the smart car follow the object.
· Calibrate based on **camera_calibration** package in ROS.

Hospital Information System (HIS) based on NeuSoft Cloud
Individual

Jun. 2019 - Jul. 2019
Northeastern University, Shenyang

· Designed Database based on **MySQL**.
· Used **SpringBoot + Jpa** to design back-end of the web programme.
· Used **Vue + Vuex + axios** to design front-end of the web programme.

High Speed and Auto Obstacle Avoidance Robot in Complex Environment
Apr. 2019 - Jun. 2019
Team Leader

Northeastern University, Shenyang

· Founded by **National Students Platform for Innovation and Entrepreneurship Training Program**.
· Plan to use **Machine Learning Algorithms** to improve the ability of obstacle avoidance.
· Adopted **Real-time global planner** method instead of traditional navigation stack and achieved a speed of nearly **3.5** m/s.
· Adopted a **Reactive Navigation** method instead of traditional navigation stack and achieved a speed of nearly **3** m/s.

Digital Camera Contest
Individual

Apr. 2019 - Jun. 2019
National Taiwan University, Taipei

· Used **Image process pipeline** to process raw image data.
· Added **Restriction Conditions** to improve **White Balance Algorithm**.
· Added **Saturation Enhancement** and **Pixel Correction** methods to improve effect of images.

Android Based Senic Guide App
Individual

Jan. 2019
Northeastern University, Shenyang

· Design several **graphic** algorithms.
· Designed Database based on **Android System**.
· Used **LitePal** to manipulate SQLite database.

Android Based Robot Control System
Team Leader

Oct. 2018 - Mar. 2019
Northeastern University, Shenyang

· Used **Rosjava** to implement basic functions.
· Used **JCraft** to implement the remote control of robot.
· Planned to use **Ros Plan** and **Smach Ros** to do task assignment.

Diabetic Retinopathy Detection
Team Leader

Oct. 2018
kaggle.com

· Doing images preprocessing(cropping, resizing, rotating and mirroring) based on **OpenCV3**.

· Used **Pupil** Features to train a **CNN** and arrived at **83**% accuracy, best among other teams.

Titanic: Machine Learning From Disaster
Individual

Sep. 2018

kaggle.com

· Creating more than **50 features** during feature engineering.
· Fusing **several machine learning algorithms** and achieved at **84.68**% accuracy.

Medical Health System Based on JavaFX
Individual

Jun. 2018

Northeastern University, Shenyang

· Implemented one **comprehensive medical health system** for Neusoft Enterprise (Amount of code ≈11000).

Shared Umbrella Mini Program (Weixin)
Team Leader

Mar. 2018

Northeastern University, Shenyang

· Implemented one **Wechat Mini Program** aimed to help people to share their umbrellas when rain suddenly.

HONORS & AWARDS

1st Prize, The NXP Cup National University Students Intelligent Car Race	Jul. 2019
Northeastern University Second Prize Scholarship (Top 5%)	Sep. 2018
2nd Prize, Jian Long Mathematical modeling Contest	May 2018
2nd Prize, National College English competition	Apr. 2018
3rd Prize, Jian Long Mathematical Competition	Apr. 2018
3rd Prize, Asia and Pacific Mathematical Contest in Modeling	Nov. 2017