

Mingrui Yu

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EDUCATION

University of Calgary

Master of Science in Software Engineering

Calgary, AB

Expected graduate: May 2023

Zhengzhou University

Bachelor of Engineering in Electronic Information Engineering

Zhengzhou, Henan, China

Aug. 2016 – June 2020

EXPERIENCE

Graduate Teaching Assistant

University of Calgary

Sept. 2021 – Present

Calgary, AB

- Helped students to write and debug C code and Object-Oriented language projects based on C++ and Java
- Wrote answers of students' homework and guided students on software model designing with SOLID and MVC

Graduate Research Assistant

University of Calgary

Jan. 2021 – Present

Calgary, AB

- Improved Object Detection and Tracking Algorithms by using deep learning approaches on drones
- Developed and implemented obstacle avoidance algorithms on drones based on deep learning

Software and Test Engineer

Baidu, Inc.

June 2020 – Dec. 2020

Shanghai, China

- Doing testing for Baidu Map APP using Python and MySQL, reduced testing time by 30%
- Doing professional HTTP and APP interface test such as performance test and safety test by using Jmeter and Fiddler

Undergraduate Research Assistant

Zhengzhou University

Sept. 2019 – Jan. 2020

Zhengzhou, Henan, China

- Developed face recognition on ROS platform by using deep learning methods
- Implemented robot navigation and tracking

PROJECTS

Vehicle Tracking And Object Detection, Based on UAVs | *Python, Deep Learning*

May 2021 – Present

- Developed one combined approach consists of Yolo and Kalman filter, able to detect and track moving objects across different regions and angles of view
- Using fine-tuned Yolov3 to detect objects and motion estimation based on Kalman filtering is integrated with deep appearance features to robustly track multiple vehicles

Posture Estimation | *Python, Deep learning*

Jan 2020 – May. 2020

- Making 15 kinds of body posture recognition data sets by using OpenPose and training model by using full neural network and the convolution of the CNN
- Achieved the recognition of different body postures and applied to anti-fall system for the elderly

Face Recolonization | *Python, ROS, Deep learning*

June 2019 – Oct. 2019

- Built maps via ROS-based laser radar, took advantage of the SLAM function package to realize the functions of robot mapping, localization, and path planning
- Created robot models with URDF files, built a simple simulation environment with rviz+ArbotiX, and created a realistic world in the Gazebo physics simulation world
- Achieved face recognition and object tracking based on ROS + OpenCV

TECHNICAL SKILLS

Languages: Python, Java, C/C++, Javascript, SQL, MATLAB, HTML, CSS

Frameworks: React-Native, JUnit, JadeROS, Pytorch, Tensorflow

Developer Tools: Git, Docker, AWS

Libraries: scikit-learn, pandas, OpenCV, NumPy, Matplotlib