# **Kefeng Huang**

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### **EDUCATION**

University College LondonLondon, UKMaster of Engineering in Computer Science09/2019 — PresentUCL Chinese Debate Team member10/2020 — PresentNanjing Dongshan Foreign Language SchoolNanjing, ChinaA-Level 4 A\* (Mathematics, Further Mathematics, Chemistry, Physics)09/2017 — 06/2019IELTS 7.507/2018Gold Award in UK Chemistry Olympiad03/2019

### RESEARCH EXPERIENCE

## **Robotic System for Identifying and Watering House Plants**

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Supervised by Prof. Simon Julier at University College London

- Technology: The robot is simulated over ROS and python is the main programming language.
- **Team Work**: We worked together as a team of 6 people, with different people working on different aspects including SLAM, Control, Path Planning and etc. Each person will implement the corresponding nodes in ROS and information is transferred using technics including Topics.
- Personal Contribution: I am responsible for the object detection and plant identification. A 3-month literature review is first conducted on detection and segmentation methods as well as the plant identification networks. Currently I am implementing the YOLOv3 nodes which takes the images as input and return detected objects and their bounding boxes.

### **Image Based Point Cloud Segmentation**

08/2021 — Present

10/2021 — Present

Guided by PhD student Henry at University of Oxford

- **Technology**: Experiments are run over KITTI-Odometry dataset as it contains both images and point cloud in each frame. SemanticKITTI is also used to provide the labels. Python is the main programming language as well as Pytorch to train the network. Nvidia Segmentation (DeepV3WPlus) is adapted to extract features from images.
- **Description**: Each 3D point is first projected to images within the same frame and the frames before. It is first implemented to choose the mode of the labels of the same point on different images. Then it is improved by making predictions using the features of the images instead. A network is trained on a new dataset that combines the actual point label and the corresponding images features.

## **TECHNICAL EXPERIENCE**

ROLE / PROJECT A MMM YYYY — Present somewhere, state

- · Lorem ipsum dolor sit amet, consectetur adipiscing elit.
- Suspendisse pretium elit quis ullamcorper ultricies.
- Morbi a nisl sit amet massa ultricies fermentum.
- Sed a diam et turpis tempor venenatis eget eget ipsum.
- Vestibulum fermentum justo vitae aliquet accumsan.

# ROLE / PROJECT B company B

MMM YYYY — MMM YYYY

somewhere, state

somewhere, state

- Aenean semper felis et viverra eleifend.
- Integer aliquam odio id tellus sollicitudin, ut pellentesque elit blandit.
- Vestibulum iaculis quam ac nibh tincidunt rutrum.

# ROLE / PROJECT C

 $\mathsf{MMM}\,\mathsf{YYYY}-\mathsf{MMM}\,\mathsf{YYYY}$ 

company C

Donec volutpat turpis et placerat pharetra.

- Sed sit amet sem facilisis, scelerisque lectus aliquam, accumsan purus.
- Aliquam at urna congue dolor luctus sodales.
- Quisque vitae tortor at elit tincidunt molestie sed ac quam.

### **ROLE / PROJECT D**

MMM YYYY - MMM YYYY

company D

somewhere, state

- Vestibulum accumsan massa quis dignissim faucibus.
- Maecenas suscipit mi ut ullamcorper pharetra.
- In vitae ligula tristique, iaculis tortor in, egestas magna.
- In fringilla nurus malesuada lectus imperdiet nulvinar

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# **ACTIVITIES**

Graduate Student Council Representative

Academic Student Association: Some Workshop, Creator/Facilitator

City Symposium Series, University of Motherland, Poster Presenter

College of Science and Engineering Student Project Showcase, Research Presenter

Graduate Research and Creative Works Showcase, State University, Research Presenter

Spring YYYY

Some Coding Sprint, University of Some Other State

YYYY — YYYY

Fall YYYY

Spring YYYY

Spring YYYY

Spring YYYY

Spring YYYY

### **SKILLS**

**Programming Languages** Python, C, Java, Dart(Flutter), x86-Assembly

**Communication** Chinese, English