

Ke GUO

E-mail: guoke9612@gmail.com * *Phone:* +86 13653629612

Linkedin: KeGUO * *Github:* GUOkekklk * *Homepage:* Ke Nash GUO

Education

Master Degree Candidate

Ecole Centrale de Nantes, France

Advanced Robotics

09/2020 - 09/2023(expected)

GPA:3.54/4

Main courses: Autonomous Vehicle; Artificial Intelligence; Computer Vision; Advanced Visual Geometry; Task-based Control; Advanced Modeling of Robots

Exchange Program

Ecole Centrale de Nantes, France

Signal, Control and Robotics

10/2020 - 05/2021

GPA:16.9/20

Main courses: Control Systems; Embedded Systems; Basics of Signal Processing and Image Methodology

Bachelor Degree

Harbin Institute of Technology at Weihai, China

Mathematics(in Information and Computing Science track)

09/2017 - 06/2021

GPA:82.37/100; Rank:12/59

Main courses: Mathematical Analysis; Higher Algebra; Probability and Statistics; Numerical Analysis; Foundations of Big Data Analysis; Mathematical Theory of Complex Systems; Ordinary Differential Equation; Numerical Methods for Partial Differential Equations; Operational Research

Work Experience

Research Engineer Intern

02/2023 - now

Visual Behavior, Lyon, France

- Responsible for the deep learning application in SLAM; replace the traditional PnP algorithm with Transformer; study the autonomous positioning algorithm based on BEV.
- Supervised by [Thibault Neveu](#)

Research Assistant

04/2022 - 06/2022

Laboratoire des Sciences du Numérique de Nantes (LS2N), Nantes, France

- Finished a project about Visual SLAM based on PX4 Vision UAV with Python on ROS2 platform by using the Google Cartographer package.
- Wrote the driver code for the RGB-D depth camera and the tf transformation for each part of the drone; obtained the final 3D point cloud map of the laboratory by using the built-in IMU of the drone and the external motion capture device and the RGB-D camera of the drone.
- Supervised by Professor [Olivier Kermorgant](#)

Research Assistant

02/2019 - 06/2021

Data Science Lab, Harbin Institute of Technology at Weihai, Weihai, China

- Systematic learned of machine learning algorithms, collaborated with computer and automation groups on projects related to the identification of land by drone photography and medical image recognition Items detecting tumors.
- Read machine learning literature and reproduce code in Python and R.
- Worked on optimizing the pooling layer of the CNN to better fit the project of identifying land. Improved the accuracy of land recognition to over 85%.
- Supervised by Professor [Huan Su](#)

Junior Java Developer Intern

12/2019 - 01/2020

Jinxiandai Company, Jinan, China

- Trained in Java skills at the company, implemented an offline news website using MySQL and Java.
- Mainly responsible for some of the front-end web code and all the database and front-end interaction based on Servlet, finally completing the general user login, query browsing, and the back-end administrator for news addition, deletion, checking, and changing.

Assistant Engineer Intern

07/2018 - 09/2018

Product Center of Shanxi Diesel Engine Industry Co., Ltd, Datong, China

- Used Python to process and analyzed sales data stored in Excel files; used the AutoRegressive Integrated Moving Average model to forecast the number of orders for the next quarter; rationalized production planning, and successfully completed production tasks.

Honors and Awards

Second prize, National College Students Mathematical Contest in Modeling, China	08/2018
Second prize, National College Student Mathematics Competition, China	12/2019
Academic Progress Scholarship in HIT, China	12/2019
People's Scholarship(Top 15%) in HIT, China	06/2020
Red Lion Science Scholarship(full funding to DPhil) provided by Data Science Lab in Hanyang University(voluntarily gave up), South Korea	01/2021
Erasmus Scholarship from QEM programme(voluntarily gave up), Europe	04/2021
Centrale Nantes Elite Scholarship (6000€), France	06/2021

Technical Skills

Programming Languages/Tools	Python, Matlab, C++, Numpy, TensorFlow, Pytorch, Sklearn, cv2, Open3d, Scipy, g2opy, Pclpy
Development Tools	Linux, ROS, Docker, Shell, Git, VScode, WandB, Vim

Language Skills

Chinese	Native
English	Full professional proficiency
French	Limited working proficiency

Research Interest

SLAM, Visual Odometry, Human-robot Interaction, Robot Vision, AGI in Robotics, RL in Robotics