Kejie Li

PhD Candidate

University of Adelaide North Terrace Campus, Adelaide, 5005
+61 421462005
kejie.li@outlook.com
au.linkedin.com/in/kejie-li-3b8ab4100

Research Experience

PhD Researcher
Feb 2017 - Present

University of Adelaide

My PhD topic is object oriented Simultaneous Localization and Mapping (SLAM) with deep learning. The proposed object SLAM incorporates deep learning to reconstruct the environment at the object level so that the SLAM system can not only densely reconstruct the geometry structure of its surrounding like traditional dense SLAM does, but also parse the environment semantically, so that it can understand the environment like our human beings.

Undergraduate Researcher
Jul 2015 - Jul 2016

the Australian National University (ANU)

I designed a Convolutional Neural Network (CNN) model to predict depth information from single monocular images. I built the CNN model in a way that it can leverage prior knowledge of pixel coordinates to ease the difficulty of learning. The performance was competitive to the state-of-the-art method at that time.

Research Assistant
Nov 2015 - May 2016

Data61 and Research School of Biology of ANU

I was supervised by Dr. Norman Warthmann and Dr. Christfried Webers in this project. We tried to design a new data structure to store DNA sequence more efficiently where we applied unsupervised learning framework such as autoencoder to help biologists analyzing the information of DNA.

Research Assistant
Mar 2014 - Jul 2014

Shandong University

I worked with Dr. Changlong Jin in this project where we applied Fisher Linear Analysis and Principal Component Analysis to perform human face recognition.

Employment Experience

Teaching Assistant
Jul 2016 - Oct 2016

ANU

Tutoring for COMP6730: Programming for Scientists, a python programming course for students from various disciplines.

Software Developer
Jan 2016 - Mar 2016

Research School of Earth Science of ANU

In this project, I worked under Dr. David Heslop. We have developed a standalone Bayesian Principal Component Analysis tool in Matlab for geologists to estimate the direction of line to a sequence of demagnetisation data for an individual specimen.

Test Analyst
Sep 2015 - Oct 2015

Intelledox

My role at Intelledox as a regression tester was to find crashes and bugs in a website built for ANU HR department by trying out different user cases.

Education

Bachelor of Advanced Computing (Honours)   Jul 2014 - July 2016

Australian National University

First Class Honours

Thesis: Improved CNN Regression Model for Depth Estimation from a Single Image

Award: International University Partnership Award, 2014

Bachelor of Computer Science   Sep 2012 - Jun 2014

Shandong University

Avg Grade: 91%

Award: 2 times First Class National Scholarship, 2012-2013

Publication

1. **Kejie Li,** Ravi Garg, Ming Cai, Ian Reid, "Optimizable Object Reconstruction from a Single View", currently under review

2. Mehdi Hosseinzadeh, **Kejie Li**, Yasir Latif, Ian Reid, "Real-time Monocular Object-model Aware Sparse SLAM", ICRA 2019

3. **Kejie Li**, Trung Pham, Huangying Zhan, Ian Reid, "Efficient Dense Point Cloud Object Reconstruction using Deformation Vector Fields", ECCV 2018

4. Huangying Zhan, Ravi Garg, Chamara Saroj Weerasekera, **Kejie Li**, Harsh Agarwal, Ian Reid, "Unsupervised Learning of Monocular Depth Estimation and Visual Odometry with Deep Feature Reconstruction", CVPR 2018

References

Dr. Ian Reid

Professor

University of Adelaide

Email - ian.reid@adelaide.edu.au

Phone:+61 (0) 8 8313 2135

Dr. Stephen Gould

Associate Professor

the Australian National University

Email - stephen.gould@anu.edu.au

Phone: +61 (2) 6125 8642