

# Junxuan Li

## Curriculum Vitae

### PERSONAL DETAILS

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*Birth* September 16, 1994  
*Address* 7 Casilda St, Harrison ACT, 2914  
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*Email* u5990546@anu.edu.au

### EDUCATION

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**Doctor of Philosophy** 2018-Present

*College of Engineering and Computer Science*

*The Australian National University*

*Majoring in: Computer Science - Computer Vision.*

Supervisor: Assoc. Prof. Antonio Robles-Kelly & Dr. Shaodi You

**Industrial Trainee, Data61, CSIRO, Australia** 2016-2018

*Working on computer vision. Finished several research projects during the studying.*

Supervisor: Assoc. Prof. Antonio Robles-Kelly & Dr. Shaodi You

**Master of Computing (Advanced)** 2016-2018

*College of Engineering and Computer Science*

*The Australian National University*

*Specialization: Artificial Intelligent.*

**BEng. Naval Architecture & Ocean Engineering** 2012-2016

*School of Naval Architecture Ocean & Civil Engineering.*

*Shanghai Jiaotong University, China*

### RESEARCH EXPERIENCE

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**A Frequency Domain Neural Network for Fast Image Super-resolution** 2017

*Junxuan Li, Antonio Robles-Kelly, Shaodi You, International Joint Conference on Neural Networks. IJCNN 2018.*

In this paper, we present a frequency domain neural network for image super-resolution. The network employs the convolution theorem so as to cast convolutions in the spatial domain as products in the frequency domain. Moreover, the non-linearity in deep nets, often achieved by a rectifier unit, is here cast as a convolution in the frequency domain. This not only yields a network which is very computationally efficient at testing but also one whose parameters can all be learnt accordingly.

**Stereo Super-resolution via a Deep Convolutional Network** 2017

*Junxuan Li, Shaodi You, Antonio Robles-Kelly, Digital Image Computing: Techniques and Applications (DICTA), 2017 International Conference on. IEEE, 2017.*

In this paper, we present a method for stereo super-resolution which employs a deep network. The network is trained using the residual image so as to obtain a high resolution image from two, low resolution views. We illustrate the utility of our network for image-pair super-resolution and compare our network to its non-gradient trained analogue and alternatives elsewhere in the literature..

**Secrets in Computing Optical Flow by Convolutional Networks** 2017

*Supervisor: Prof. Antonio Robles-Kelly & Dr. Shaodi You*

Proposed several CNNs network architectures that can estimate optical flow, and fully unveiled the intrinsic different between these structures. It was completed by MatConvNet(Matlab).

### **The interface development and application of OPT-Ship**

2016

*Supervisor: Prof. Decheng Wang*

Undergraduate graduation project thesis. It implemented the interface of a software - OPTShip - by using C++ and Qt platform.

### **Research of mass transit passenger flow distribution base on IC data**

2011

*Supervisor: Dr. Linjie Gao*

26th Participation in Research Program(PRP). This project was aimed to analysis the data retrieved from IC and GPS and give an overall judgment to transit distribution. It was completed by using PYTHON.

## **SKILLS**

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*Languages* Chinese

English

*Programing*

*Languages*

PYTHON, JAVA , MATLAB, C++, L<sup>A</sup>T<sub>E</sub>X, SQL

## **AWARDS & HONORS**

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**Scholarship for Academic Excellence(Class C)**

2015

*Shanghai Jiaotong University, China*

**Scholarship for Academic Excellence(Class C)**

2014

*Shanghai Jiaotong University, China*

**30th Chinese College Physics Competition First Prize**

2013

*Shanghai, China*

**Scholarship for Academic Excellence(Class B)**

2013

*Shanghai Jiaotong University, China*