

# Ziwei Zhang

SOFTWARE ENGINEER · DEEP LEARNING

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## Summary

Graduated Master Student of Information Technology and Information Mgmt in USyd. Experienced in Machine Learning and Deeping Learning (Computer Vision). Having research in Object Detection and Fine Grain Image Classification.

## Work Experience

### LinkSure Corp.

Guangzhou, China

GRAPHIC ALGORITHM ENGINEER

Jan. 2019 - Apr. 2019

- Researching and Applying different kinds of optimizers(Newton/Levenberg-Marquard) to deal with the problem of finding global minimum
- Building an image binary classifier to distinguish object from annoying backgrounds from scratch with SVM. It also suffer from imbalanced classes issue which is needed to be tackled.
- Facial Recognition: Modifying the current MTCNN network to accelerate the training and detecting speed by using Depthwise separate Conv

### Nuance Inc.

Shanghai, China

TTS RESEARCH ENGINEER

Apr. 2019 - Now

- Developing Text to Speech Demo platform using Django and jQuery as a full-stack Engineer
- Researching TTS Algorithm and models

## Project Experience

### Utilizing Pre-trained Model for Fine-Grained Species Classification

Sydney

COMPUTER VISION ENGINEER

Mar. 2018 - June 2018

- We provide a theory that mix-combined background is able to improve the training performance. Firstly,using Mask-RCNN to isolate the foreground and background. Then, WGAN-GP is used to fill the missing pixel of the background and finally combined the foreground and background randomly to generate a new dataset. The new dataset contains the previous images and the newly generated images. It can improve the training performance with confirm.

### Kaggle Contest: What's Cooking?

Sydney

MACHINE LEARNING ENGINEER

June 2018 - Sept. 2018

- Basically it is a text classification. Firstly use the WordNet to remove non-English word and then using TF-IDF for word embedding. Finally, I use ensemble model for the final classification and got the rank No. 3

### Spark KNN Algorithm

Sydney

MACHINE LEARNING ENGINEER

Mar. 2018 - Apr. 2018

- This algorithm is written from scratch on Spark platform. Under the same circumstances, this KNN algorithm is able to run parallel and faster than the scikit-learn non-parallel KNN algorithm. They both reach the similar Precision and Recall.

## Education

### USyd(University of Sydney)

Sydney, Australia

M.S. IN INFORMATION TECHNOLOGY

Mar. 2017 - Exp. May 2019

- Course: Machine Learning and Data Mining, Deep Learning, Cloud Computing, Advanced Network Technology

### USyd(University of Sydney)

Sydney, Australia

M.S. IN INFORMATION TECHNOLOGY MGMT

Mar. 2017 - Exp. May 2019

- Course: Information Security, Advanced Project Management, IT Innovation

### SCAU(South China Agriculture University)

Guangzhou, China

B.ENG. IN ELECTRONIC ENGINEERING

Sept. 2012 - June 2016

- Course: Linear Algebra, Digital Signal Processing, Embedded Linux System