

# Kexin Ding

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## Summary

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- Strong and pure enthusiasm in research. Especially in Computer Vision and Deep Learning.
- Basic theoretical knowledge in Deep Learning.
- Still attempting to improve practical skill.
- Have a relatively solid background in programming and mathematical theory
- Experience with report writing and demonstrated skills in academic communication.

## EDUCATION

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### Lehigh University

M.S. in Computer Science; Overall GPA: 3.50/4.00

Pennsylvania, US

08/2017-05/2019(Expected)

### Xidian University

B.S. in Intelligent Science & Technology; Overall GPA: 80/100, Major GPA 85/100  
(Minor: Computer Science)

Xi'an, China

09/2013-06/2017

## RESEARCH PROJECTS

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### • Deep Attention Model for Multi-instance Relation Extraction

Lehigh University, US

Supervisor: Prof Sihong Xie

08/2018 – now

#### Description:

- Provided an Attention-based Bidirectional LSTM network for multi-instance relation extraction.  
(Under preparing the paper and will submit it later.)

#### Contribution:

- Generated dataset from raw data. And labeled for the mentions in the dataset.
- Modified the attention-based bidirectional-LSTM model from the reference paper and trained the LSTM network by using our dataset.
- Doing Hyper-parameter optimization to get a better result.
- Evaluate the model by accuracy and f1-score and compared the result with other models.

### • Deep Network for Image Sentiment Analysis

Lehigh University, US

Supervisor: Prof Xiaolei Huang

01/2018 – 05/2018

#### Description:

- Reproduced and modified the method in the reference paper.

#### Contribution:

- Generated CNN architecture mentioned in the reference paper.
- Load VGG16 model with the pre-trained weights and use it as a start point in CNN model.
- Trained CNN model by Twitter image dataset

### • Kaggle Competition: MOOC Dropout Prediction

Lehigh University, US

Supervisor: Prof Ting Wang

11/2017 – 12/2017

#### Description:

- Generated a multi-algorithm prediction system and make a prediction for dropout probability.

#### Contribution:

- Data preprocessing: generated different artificial feature by observed students early course activities and found the relationship between the original dataset.
- Built a predictor (contains different machine learning algorithms: kmeans, Xgboost, randomforest) that can predict the probability of a student will drop out an enrollment.
- Utilized grid search to achieve a better performance.

- **Image Caption**

Lehigh University, US

*Supervisor: Prof Mooi Choo Chuah*

*10/2017 – 11/2017*

**Description:**

- Modified a CNN and LSTM combined model to do image caption.

**Contribution:**

- Built a model by utilizing CNN to image and LSTM to word to achieve the image/word-level feature.
- Trained model by using flickr30k.
- Designed a function to generate caption for selected image.

- **Human Activity Recognition**

Lehigh University, US

*Supervisor: Prof Mooi Choo Chuah*

*11/2017 – 12/2017*

**Description:**

- Generate simple neural network to solve human activity recognition.

**Contribution:**

- Generate different neural network(LSTM and bidirectional-LSTM) to recognize human activity.
- Trained model by using UCI HAR dataset
- Evaluate the result by confusion matrix.
- Compare and analysis different models

## **INTERNSHIPS**

**Intelligent Chip Engine Tech Co. Ltd.**

Beijing, China

Image Algorithm Engineer

07/2016-09/2016

- Designed and modified the algorithms related to image/video intelligent analysis and processing.
- Conducted algorithm code implementation, optimization and transplantation.

## **LEADERSHIP/ACTIVITIES**

- Director of Organization Dept. of College League Committee

09/2014-06/2015

## **HONORS/AWARDS**

- One-Subject Scholarship, Xidian University 09/2015&09/2016
- 3<sup>rd</sup> Prize in “Xinghuo Cup”, School of Electrical Engineering 09/2014
- Excellent Student Leader, Xidian University 05/2014

## **LANGUAGES/SKILLS/HOBBIES**

**Computer Skills:** Python, Java, Linux, C, Scala, Chamm, Microsoft word, Microsoft excel

**Framework:** Scikit-learn, Keras, Tensorflow

**Language Skills:** English, Mandarin