

# JIAJUN TANG

Tianjin, China

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## EDUCATION

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**Tianjin Polytechnic University**

BEng in Computer Science (Elite Class of Artificial Intelligence)

GPA: 3.56/4.00

*Tianjin, China*

*Sep. 2016 - Present*

## HONORS

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Three years of Deans List, 2016 - 2019

Three years of Merit Scholarship, 2016 - 2019

## PROJECTS

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**Image caption generation algorithm based on attention mechanism**

*Nov. 2019 - Present*

The attention mechanism can quickly capture the information that needs to be focused on in the picture, thus improving the accuracy of subtitles. We are committed to proposing a more complete attentional mechanism.

Just like the visual mechanism of human, looking at a picture does not mean staring at the whole picture. Therefore, I think the problem in image annotation added Attention mechanism, is after the extraction of image features, image characteristics and predict the word information before common input RNN hidden layer and output calculation, so that you can according to predict words before information prompt should focus on which part of the image, rather than aimless pay close Attention to the whole image.

**Apply attention mechanism to singing voice separation**

*Aug. 2019 - Oct. 2019*

I proposed an end-to-end neural network based on self-attention layer, which focuses on the singing voice separation task. It works on spectrogram domain, which can separate songs into accompaniments and vocals; Compared with the baselines, the evaluation metric of our model is greatly improved while the number of model parameters is significantly reduced.

## TECHNICAL STRENGTHS

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**Programing Language**

Python, Java, C

**Programing Framework**

TensorFlow, PyTorch

**GitHub**

<https://github.com/sandwas>

## EXPERIENCE

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**Student at TGU**

*Sep. 2016 - Present*

Supervised by Prof. Jianmin Wang

- Studied computer related courses
- including algorithm program and analysis: Greedy algorithm, backtracking algorithm,
- Data mining: Apriori algorithm,
- Computer vision: SIFT algorithm, Sober algorithm,
- Speech and natural language processing: transformer, LSTM

## **MLA 2019**

Tianjin, China

The 17th China conference on machine learning and its applications  
I met many industry leaders and listened to their reports

## **Student Research Assistant at Tianjin Key Laboratory of Autonomous Intelligence Technology and Systems**

Oct. 2019 - Present

Explore reinforcement learning in computer vision and nlp

## **RESEARCH INTERESTS**

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Machine Learning, Deep Learning, NLP

## **PERSONAL TRAITS**

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Highly motivated and eager to learn new things.

Strong motivational and leadership skills.

Ability to work as an individual as well as in group.