

Yixiao Zhang

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Natural Language Processing, Data Mining, Symbolic Domain Music Generation

Education

University of Electronic Science and Technology of China(UESTC)

B.ENG. IN COMPUTER SCIENCE AND ENGINEERING

- GPA: 3.76/4, Average Score: 87.01/100, TOEFL: 95

Chengdu, P.R.China

Sept. 2015 - Exp. Jun. 2019

Research Experiences

Machine Learning Group - Microsoft Research of Asia

RESEARCH INTERN

Beijing, P.R. China

Nov. 2018 - Jun. 2019

- Working on finance data mining and deep learning, supervised by Weiqing Liu and Xiao Yang.
- We proposed a novel deep learning model, which is combined with two sub-modules: The meta-learning teacher model observes current environment, and add weights to training data to guide the student model the learning direction; the student model predicts stock prices.
- The backtest results show that the new model can get more than 10% excess return compared with the traditional deep learning model. Our models can be used in almost all existing deep learning models without modification to enhance their performance.

University of Lethbridge, Mitacs Globalink Program 2018

RESEARCH ASSISTANT

Lethbridge, Alberta, Canada

Jul. 2018 - Oct. 2018

- Research assistance under supervision of Prof. Yllias Chali.
- During this period, I participate in research on a text summarization model. Furthermore, to improve the performance of summarization, especially the grammar, I reproduced a deep neural model based on VAE using PyTorch, and transfer the model into summarization task.

Institute of Intelligent Learning Science and Applications of UESTC

UNDERGRADUATE RESEARCH PROGRAM

Chengdu, P.R. China

Jun. 2016 - Jun. 2018

- Research assistant in Natural Language Processing under supervision of Prof. Qu.
- During this period, I did some research on abstract summarization, and developed a deep model, which aimed to improve the quality of summarization result. This model took part in NLPCC 2018 Shared Task, and I wrote a pre-print draft to conclude my deep model.

Programs

Pre-training Sentences with Restricted Boltzmann Machine for Extractive Document Summarization

SECOND AUTHOR

Under Revision

Nov. 2018

- We present a neural extractive summarizer with sentences pre-trained without supervision using a Restricted Boltzmann Machine(RBM). The pre-trained sentences serve as input to a Recurrent Neural Network (RNN) based sequence model for extractive summarization. Our model produces extractive summaries that beat the state-of-the-art with single and multi-document settings on both the DUC 2004 and CNN/DailyMail datasets. We also introduce a simple but efficient algorithm for building a training corpus for extractive summarization, i.e., documents with labelled summary-worthy sentences.

Symbolic Music Generation Model with Emotion Recognition and Adversarial Training

TEAM LEADER & CODER, INNOVATION FUNDING OF SCHOOL OF CSE

Chengdu, P.R.China

Apr. 2017 - Sept. 2017

- We built a music generation model, which is combined by two neural network units. Users can input a sentence or an image, then emotion analysis module extracts a emotion vector. The music generation module receives the vector, and generate background music in different styles. We used Convolutional Neural Network, Cognitive Service, Deep Convolutional Generative Adversarial Network.
- Outstanding Prize, Yinxinghuang School-Level Innovation Program

Symbolic Music Generation Model Based On Reinforcement Learning and GAN

TEAM LEADER, MICROSOFT STUDENT PROJECT, UNDER THE SUPERVISION OF CHAO CHEN, STCA

Chengdu, P.R.China

Dec. 2017 - Feb. 2018

- Transformed the reinforcement learning model SeqGAN to the field of music generation. Used Nottingham Dataset, and fine-tuned key parameters. Results are used as background music in my independent game program in Imagine Cup 2018.
- Third Prize, Sichuan Regional, Imagine Cup 2018
- Outstanding Prize, 2018 Microsoft Student Practice Space

Scholarships & Awards

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| 2019 | Outstanding Student Award, UESTC , Chengdu, P.R.China | 2019 |
| 2018 | Mitacs Globalink Graduate Fellowship , CAD 15,000 | Applied in Jan. 2019 |
| 2017 | Renmin Scholarship 2017 & 2016 , Chengdu, P.R.China | 2017 & 2016 |