

# YUXIANG WU

☎+44 07367 668368 ✉ yuxiang.cs@gmail.com

🏠 jimmycode.github.io 🌐 github.com/jimmycode 🐦 @mindjimmy

## EDUCATION

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### University College London

*September 2018 - Present*

PhD student in Computer Science, member of the UCLNLP group

Research interests: Question Answering, Knowledge Base, NLP and ML

Supervisors: Prof. Sebastian Riedel and Dr. Pontus Stenetorp

### Hong Kong University of Science and Technology

*September 2015 - August 2018*

MPhil in Computer Science and Engineering

Research topics: Summarisation, Reinforcement Learning, Transfer Learning, and Dialog Systems

Supervisors: Prof. Qiang Yang and Dr. Yangqiu Song

Thesis: Summarisation with Deep Transfer Learning

CGPA: 3.94/4.0

### Sun Yat-Sen University

*September 2011 - June 2015*

BSc in Computer Science and Technology

Thesis: Neural Network-based Link Prediction for Social Networks

Outstanding Graduate Student Awardee (first-class honours equivalent)

CGPA: 4.0/5.0 (top 5%)

### Queensland University of Technology (Australia)

*February - July 2014*

Exchange program with the Information Technology department.

## WORK EXPERIENCE

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### Facebook AI Research

February - September 2019

*Contingent Worker (Part-time Visiting Researcher)*

*London, United Kingdom*

- Conducted quantitative and qualitative studies regarding how much relational knowledge is presented in pretrained language models (LM). This work ends up being part of the EMNLP-19 publication.
- Investigated novel pretraining methods to incorporate external knowledge into pretrained LMs.
- Investigated how introducing external contexts would impact the performance of downstream NLP tasks (e.g., reading comprehension).

### Tencent, Inc

March 2016 - November 2017

*Part-time Research Intern (WeChat Group)*

*Shenzhen, China*

- Developed deep neural network-based abstractive and extractive summarization models, and increased the user satisfaction rate by approximately 18% on WeChat news feeds.
- Developed a WeChat Reading Assistant App that summarises news posts in a timeline fashion.
- Developed a RESTful Chinese abstractive summarization API for WeChat's internal use.
- This work is presented as part of my AAAI-18 paper.

### Microsoft Research

December 2014 - July 2015

*Full-time Research Intern (Web Search and Data Management Group)*

*Beijing, China*

- Designed and implemented a numerical computation language (MatrixView) for SQL Server to enable native and efficient execution of numerical analysis within relational databases.
- Developed an interpreter that can translate MatrixView code into efficient SQL queries and optimise their corresponding SQL execution plans.
- Developed a machine learning library based on MatrixView, which supports basic ML algorithms such as logistic regression, support vector machine, and stochastic gradient descent.

- Implemented the kNN algorithm with the Graphlab framework.
- Modeled uncertainty in knowledge bases using Bayesian Networks.

## PUBLICATIONS

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- Wu, Y., Riedel, S., Minervini, P., & Stenetorp, P. (2020). Don't read too much into it: Adaptive computation for Open-Domain question answering. In *EMNLP 2020*.
- Petroni, F., Lewis, P. S. H., Piktus, A., Rocktäschel, T., Wu, Y., Miller, A. H., & Riedel, S. (2020). How context affects language models' factual predictions. In *AKBC 2020*. (**Best paper award**)
- Petroni, F., Rocktäschel, T., Riedel, S., Lewis, P., Bakhtin, A., Wu, Y., & Miller, A. H. (2019). Language Models as Knowledge Bases? In *EMNLP-IJCNLP 2019* (pp. 2463–2473).
- Wu, Y., & Hu, B. (2018). Learning to Extract Coherent Summary via Deep Reinforcement Learning. In *AAAI-18* (pp. 5602–5609). (**Oral presentation, acceptance rate: 24.6%**)
- Wang, W., Wu, Y., Zhang, Y., Lu, Z., Mo, K., & Yang, Q. (2017). Integrating User and Agent Models: A Deep Task-Oriented Dialogue System. *CoRR*, *abs/1711.03697*.
- Li, Z., Zhang, Y., Wei, Y., Wu, Y., & Yang, Q. (2017). End-to-End Adversarial Memory Network for Cross-domain Sentiment Classification. In *IJCAI-17* (pp. 2237–2243).

## TECHNICAL SKILLS

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<b>GitHub</b>	<a href="https://github.com/jimmycode/">https://github.com/jimmycode/</a>
<b>Programming Languages</b>	Python, Java, C#, C/C++, MATLAB, SQL
<b>Deep Learning Frameworks</b>	PyTorch, TensorFlow, Theano
<b>Tools</b>	Linux, vim, git, L <sup>A</sup> T <sub>E</sub> X, tmux
<b>Natural Languages</b>	Mandarin (native), Cantonese (native), English (fluent), TOEFL 111/120, taken in July 2018)

## AWARDS AND SCHOLARSHIPS

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AKBC 2020 Best Paper Awar (\$1,000)	2020
UCL Student Conference Fund for EMNLP2019 (£1456.00)	2019
Postgraduate Teaching Assistant Scholarship, University College London	2018 - present
AAAI-18 Conference Travel Grant and Student Volunteer	2018
Postgraduate Research Scholarship, Hong Kong University of Science and Technology	2015-2018
5 <sup>th</sup> place in Video Object Detection Track of ILSVRC (ImageNet) Competition	2015
Outstanding Graduate Student Award of Sun Yat-Sen University	2015
9 <sup>th</sup> Place in Sequential Random SAT Track of The International SAT Competition	2014
Meritorious Winner of Interdisciplinary Contest In Modeling	2014
First Prize (10,000 RMB), Sun Yat-Sen University Outstanding Student Scholarship	2011-2012
Second Prize (5,000 RMB), Sun Yat-Sen University Outstanding Student Scholarship	2012-2013
Chow Tai Fook Scholarship (5,000 RMB)	2012

## LEADERSHIP ROLES

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### **Teaching Assistant, University College London**

October 2018 -

Advanced Reinforcement Learning and Deep Learning (COMP0089, Spring 2019), Statistical Natural Language Processing (COMP0087, Spring 2019), Machine Vision (COMP0137, Fall 2019), System Engineering (COMP0035, Fall 2018 & Spring 2019), Introductory Programming (COMP0066, Fall 2018)

### **Teaching Assistant, HKUST**

2016-2017

Deep Learning (MSBD 6000B, Fall 2017), Introduction to Programming (Spring 2016 - Spring 2017)

### **President of Baidu Elite Club, Sun Yat-Sen University**

August 2013 - July 2014

- I led the recruitment, training, and management of an information technology club for young professionals. The club expanded to more than sixty members within the first year it is established.
- I organised two training sessions and an online programming contest every week, and invited alumni to give career talks and technical sharing seminars.
- I delivered tutorials about mobile application development and web development to the members.