

## PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	School of AI and Advanced Computing
Supervisors	Principal supervisor: Dr. Qi Chen (XJTLU) Co-supervisor: Dr. Wei Wang (XJTLU) Co-supervisor: Dr. Tulika Saha (UoL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Leveraging Knowledge Bases and Graphs for Enhanced Natural Language Understanding and Generation
Contact	Please email <a href="mailto:qi.chen02@xjtlu.edu.cn">qi.chen02@xjtlu.edu.cn</a> (XJTLU principal supervisor's email address) with a subject line of the PhD project title.  The principal supervisor's profile is linked here: <a href="https://scholar.xjtlu.edu.cn/en/persons/QiChen02">https://scholar.xjtlu.edu.cn/en/persons/QiChen02</a>

### **Requirements:**

The candidate should have a first class or upper second class honours degree, or a master's degree (or equivalent qualification), in Computer Science, Data Science, Artificial Intelligence or related ones.

Evidence of good spoken and written English is essential. The candidate should have an IELTS score of **6.5 or above**, if the first language is not English. This position is open to all qualified candidates irrespective of nationality.

### **Degree:**

The student will be awarded a PhD degree from the University of Liverpool (UK) upon successful completion of the program.

### **Funding:**

The PhD studentship is available for three years subject to satisfactory progress by the student. The award covers 50% tuition fee reduction for three years (RMB 148,500 total value). It also provides up to RMB 16,500 to allow participation at international conferences during the period of the award. The scholarship holder is expected to carry out the major part of his or her research at XJTLU in Suzhou, China. However, he or she is eligible for a research study visit to the University of Liverpool up to six months, if this is required by the project.

### **Project Description:**

**Title:** Leveraging Knowledge Bases and Graphs for Enhanced Natural Language Understanding and Generation

**Keywords:** Natural Language Generation, Large Language Models, Deep Learning, Knowledge Graph

**Summary:** Text generation has witnessed significant advancements in recent years with the emergence of Large Language Models (LLMs) such as ChatGPT. Despite their capabilities, these models are far from perfect, often exhibiting limitations in terms of reliability, contextuality, and timeliness. Challenges such as hallucinations and the struggle to maintain up-to-date knowledge in generated content should be addressed to ensure AI-generated text is trustworthy and dependable. This PhD project aims to tackle these challenges by focusing on knowledge enhancement for text generation models, particularly LLMs. The key objective is to develop strategies that seamlessly integrate knowledge bases and knowledge graphs into text generation models and LLMs, thereby improving their accuracy and timeliness.

For more information about doctoral scholarship and PhD programme at Xi'an Jiaotong-Liverpool University (XJTLU), please visit

<https://www.xjtlu.edu.cn/en/admissions/global/entry-requirements/>

<https://www.xjtlu.edu.cn/en/admissions/global/fees-and-scholarship>

**How to Apply:**

Interested applicants are advised to [qi.chen02@xjtlu.edu.cn](mailto:qi.chen02@xjtlu.edu.cn) (XJTLU principal supervisor's email address) the following documents for initial review and assessment (please put the project title in the subject line).

- CV
- Two formal reference letters
- Personal statement outlining your interest in the position
- Certificates of English language qualifications (IELTS or equivalent)
- Full academic transcripts in both Chinese and English (for international students, only the English version is required)
- Verified certificates of education qualifications in both Chinese and English (for international students, only the English version is required)
- PDF copy of Master Degree dissertation (or an equivalent writing sample) and examiners reports available