

# Yihong Liu

Technical University of Munich

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## EDUCATION

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- **Technical University of Munich** Munich, Germany  
*Programme: Data Engineering and Analytics* Nov. 2019 – Oct. 2021
  - **Degree:** Master of Science (M. Sc.), passed with distinction
  - **Overall Grade:** 1.4 / 1.0
  - **Core modules:** Foundations of Data Engineering/ Data Analysis, Applied Regression, Computational Statistics, Machine Learning, Introduction to Deep Learning, Natural Language Processing, Machine Learning in Graphs and Sequential Data
- **Southwest University** Chongqing, China  
*Major: Computer Science and Technology* Sept. 2015 – Jul. 2019
  - **Degree:** Bachelor of Engineering (B. E.)
  - **Overall GPA:** 90.83 / 100
  - **Major GPA:** 96.08 / 100
  - **Ranking:** 2%
  - **Core modules:** Data Structure, Operating System, Computer Network, Computer Organisation, Database Systems, Analysis and Design of Algorithms, Data Mining and Artificial Intelligence

## ACADEMIC ACTIVITIES

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- **Master Thesis** Center for Information and Language Processing, LMU  
*Multilingual Machine Translation Using Normalizing Flows* Apr. 2021 – Nov. 2021
  - **Supervisor:** Prof. Dr. Georg Groh and Prof. Dr. Hinrich Schuetze
  - **Advisor:** M. Sc. Haris Jabbar
  - **Description:** Researched on the possibility of using normalizing flows for unsupervised machine translation
- **Master Seminar** Data Analytics and Machine Learning Group, TUM  
*Selected Topics in Machine Learning* Nov. 2020 – Feb. 2021
  - **Supervisor:** M. Sc. Bertrand Charpentier
  - **Lecturer:** Prof. Dr. Stephan Guennemann
  - **Major Work:** Did a comprehensive literature research on Bayesian Neural Networks (BNNs)
- **Guided Research** Social Computing Group, TUM  
*Using Label Information as Supervised Pretraining Guidance for Hate Speech Detection* Apr. 2020 – Nov. 2020
  - **Supervisor:** Prof. Dr. Georg Groh
  - **Advisor:** M. Sc. Maximilian Wich
  - **Description:** Researched on using the semantics of labels to improve the performance for hate speech detection
- **Master-Praktikum/Lab Course** Social Computing Group, TUM  
*Machine Learning for Natural Language Processing* Apr. 2020 – Jul. 2020
  - **Supervisor:** Prof. Dr. Georg Groh
  - **Advisor:** M. Sc. Maximilian Wich
  - **Description:** Researched on multi-task learning architectures and methods for hate speech detection
  - **Main Work:** Implemented soft-parameter and hard-parameter sharing models
- **Supervisor's Weekly Seminar** Southwest University  
*Machine Learning and Deep Learning* Sept. 2016 – Jun. 2019
  - **Role:** Member, then Organiser
  - **Main Work:** Organized the weekly seminar and shared basic Natural Language Processing techniques.
- **Undergraduate Science and Technology Innovation Funding Project** Southwest University  
*Vectorized Semantic Representations of Multi-lingual Short Texts* Nov. 2017 – Nov. 2018
  - **Supervisor:** Xianchun Zou, associate professor

- **Role:** Host
- **Main Work:** Designed the neural network based method for learning sentence representations.

- **Academic Curriculum Design** Southwest University  
*Sentiment Analysis System* *Feb. 2018 – Mar. 2018*
  - **Description:** Developed a website where the sentiment of a given short text can be judged.
  - **Main Work:** Designed the back-end machine learning algorithms of sentiment analysis.

## PUBLICATION

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- **Y. Liu et al (2020). A Label-Oriented Loss Function for Learning Sentence Representations. Computer Speech & Language, Volume 66, 101165. (<https://doi.org/10.1016/j.csl.2020.101165>)**

## WORKING EXPERIENCE

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- **Social Practice and Investigation in the Rural Areas of Chongqing** Chongqing, China  
*Leader and Participant* *Jun. 2017 - Jul. 2017*
- **Spirit Cultural Exchange** South Dakota, USA  
*Hotel Receptionist and Laundry Shift Leader* *Jun. 2016 - Sept. 2016*

## HONOURS AND AWARDS

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- **German National Scholarship (2019 – 2020)**
- **Outstanding Graduate of Southwest University (2019)**
- **Mathematical Contest In Modeling: Honourable Mention (2018)**
- **China National Scholarship (2017 – 2018)**
- **China Undergraduate Mathematical Contest in Modeling: 2nd Prize in Chongqing Contest District (2017)**
- **Mathematical Contest In Modeling: Honourable Mention (2017)**
- **The First Prize Scholarship of Southwest University (2016 – 2017)**

## LANGUAGE PROFICIENCY

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- **Chinese:** Native speaker.
- **English:** Fluent. IELTS(Overall: 7.5).
- **German:** Medium. Obtained Goethe Certificate A2 and leaned for B2.
- **French:** Beginner. Finished the content of A1 level.

## RESEARCH INTERESTS

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**Sentiment Analysis, Language Modelling and Neural Machine Translation**

## PROGRAMMING SKILLS

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- **Languages:** Python, MATLAB, C, C++, Java, R
- **Toolkits:** PyTorch, TensorFlow, Keras, Sklearn, NLTK, NumPy