# Hengxu Lin

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## EDUCATION

**Fudan University**, *Master of Applied Statistics* **Sept. in 2021-June. in 2023**

- **Lab:** FudanDISC (interested in Dialogue System, supervised by Prof. Zhongyu Wei)

**Zhejiang University**, *B.S of Management Information Systems* **Sept. in 2017-June. in 2021**

- **Honors:** Outstanding Graduates, The First Prize Scholarship, Honorable Mention in MCM/ICM

## PROFESSIONAL EXPERIENCE

**ByteDance, *Recommendation System Research Intern*** **May. in 2022-Sept. in 2022**

- Participated in Toutiao's push business, optimized CTR of push messages through cutting-edge recall, ranking, and frequency control algorithms, thereby directly increased DAU of Toutiao.
- Enlarged article candidates, added WeiToutiao articles and provincial articles as enlarged candidates, carried out ab tests to prove that enlarging candidates effectively increase CTR+0.835%, DAU+0.2%.
- Used batch softmax loss, adding real negative examples and other methods to debias hot articles in the recall stage, CTR+0.3% on the basis of effectively reducing the ratio of hot articles.

**CETHIK Group Corporation, *NLP Research Intern*** **Nov. in 2020-Apr. in 2021**

- Participated in the Key R&D Project of Zhejiang Province "Artificial Intelligence-based Digital Diagnosis and System Development", and developed a medical dialogue system for ophthalmic diseases.
- Used Scrapy to get ophthalmic entity information and relationship information from website, used Neo4j to build a medical knowledge graph, and built a simple dialogue system on the graph.

## RESEARCH EXPERIENCE

**EASED: An Emotion-Aware Stratified Encoder-Decoder, *Lead Author*** **Mar. in 2022-Sept. in 2022**

- COLING 2022 Short Paper (Submitted); The paper proposes EASED, An Emotion-Aware Stratified Encoder-Decoder for Dialogue Strategy Prediction.
- The model adopts a multi-task framework to explicitly model emotional states of seekers, takes into account the interactive information in dialogues, and hierarchically models contexts, seekers and supporters.
- The F1 score of EASED on ESConv dataset reaches 36.71, which is about 21.9% higher than the state-of-the-art model in Emotional Support Dialog Systems.

**Fudan-CLP Jinxin Research Center: Intelligent Call, *Developer*** **Sept. in 2021-Jun. in 2022**

- An automatic dialogue system implemented with natural language processing technology.
- Responsible for the development of Rule Engine, including Intent Recognition Module, data augmentation, Rule Logical Tree, API packaging (Python Flask)
- Implemented a NER model in banking scenarios. In few-shot learning scenario, built BERT+CRF model to identify 8 named entities with data augmentation, and the offline test F1 score is 97.45.

**Research on Emotion Recognition in Conversations, *Author*** **Sept. in 2020-Jun. in 2021**

- Bachelor thesis. Implemented DialogueRNN, DialogueGCN, BERT and Graph Attention Network with Relational Positional Encoding (RGAT) to recognize emotion in conversations on IEMOCAP dataset.
- Proposed a new relational position encoding for RGAT. Experiments showed that RGAT with proposed encoding has better performance than RGAT with other positional encoding.

## SKILLS

- Familiar with **Python**, having experience **R, SQL, C++, d3.js** in courses or internships projects.
- English as working language, have earned 100 TOEFL score.