LE ZHANG

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EDUCATION

Fudan University **Sep. 2018 – June 2022(expected)**
Bachelor *of Engineering in Biomedical Engineering* *Shanghai, China*

- GPA: **Major: 3.87 / 4.0**, Overall: 3.75 / 4.0 (freshman: 3.57, sophomore: 3.9, junior: 3.82)
- **Rank**: $\mathbf{5^{th}}$/ 227

Core Courses

- **Mathematics**: Mathematical Analysis A (4.0 / 4.0), Linear Algebra, Probability, Statics and Stochastic Process (4.0 / 4.0), Elements of Information theory (4.0 / 4.0), Engineering Mathematics (4.0 / 4.0)
- **EE&CS**: Programming, Python Programming (4.0 / 4.0), Data Structure (4.0 / 4.0), Machine Learning (4.0 / 4.0), Computer Architecture (4.0 / 4.0), Database System (4.0 / 4.0), Digital image processing (4.0 / 4.0), Medical imaging Technology (4.0 / 4.0), Digital Logic (4.0 / 4.0), Signal and Communication System (4.0 / 4.0)

Research Interest: Natural Language Processing, Multimodal Machine Learning

EXPERIENCE

Georgia Tech's Social and Language Technologies (SALT) lab **May 2021 – Sep 2021**
Summer Research Intern, Advisor: Prof. Diyi Yang *Remote*

- Proposed **TreeMix**, a novel compositional data augmentation method for natural language understanding
- Evaluated in a wide range of benchmarks including GLUE and empirically validate that TreeMix outperforms current state-of-the-art data augmentation methods

Shanghai QiZhi Research Institute **Feb 2021 – Apr 2021**
Research Intern, PI: Prof. Hang Zhao *Shanghai, China*

- Expanded the task formulation and datasets introduced in *Visual Indicates Sound* by reprocessing original datasets and adding multi-modal features
- Designed a framework based on patch-wise contrastive learning and introduced a sound embedding module to utilize sound signals as indicator for the translation
- Designed a crowd source HTML page for Amazon Mechanical Turk

Fudan Data Intelligence and Social Computing Lab (DISC) **Sep 2020 – present**
Research assistant, Advisor: Prof. Zhongyu Wei *Shanghai, China*

- Built a multi-modal Chinese event dataset: Collected multi-modal document (image or video & text) from official and commercial press account on Sina-weibo using crawler. Predefined categories and sub-types for social events e.g. {Military: [conflict, weapon operation, transportation]}
- Designed a crowd source labelling pipeline and HTML page for crowd source labeling

PUBLICATION & MANUSCRIPTS

1. **Le Zhang**, Zichao Yang, Diyi Yang. TreeMix: Compositional Constituency-based Data Augmentation for Natural Language Understanding. **Submitted to** *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (ACL 2022).*[page]

SELECTED COURSE PROJECTS

Machine Learning | *Python, PyQt5* **November 2020**

- Developed a face mask detection & classification framework based on YOLO5 and ResNet50, and a GUI implemented with PyQt5
- Applied various techniques method such as Mixup and BatchNorm

Database System | *Python, PyQt5, Mysql* **December 2020**

- Implement a Administration System connected with PolarDB, providing services such as adding courses and enrolling students
- Designed a GUI for the system based on PyQt5, and replace SQL commands with simple click operations

SELECTED AWARDS

- Fudan Huatai Securities Technology Scholarship for 2020-2021 (Highest scholarship sponsored by Huatai Corp., top 1%)
- Fudan HUAWEI Student Scholarship for 2019-2020 (Highest scholarship sponsored by HUAWEI Corp., top 1%)
- Fudan University Outstanding Undergraduate Student Scholarship Second Prize for 2018-2019 (top 5%)

SKILLS

Programming Languages: Python, C/C++, JavaScript, HTML/CSS, SQL ,Bash, MatLab
Tools and Frameworks: Git, LaTeX, Pytorch, Huggingface, Docker