Kunlun Zhu

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EDUCATION

School of Computer Science and Engineering, Sun Yat-Sen University (SYSU) *Aug 2015-July 2020*

B.E in Computer Science, Overall GPA: 3.8/5.0 WES Major GPA: 3.82/4.0 (Around Top 25%)

TOEFL best: 108 (Reading: 29, Listening: 28, Speaking: 23, Writing: 28) GRE: (V:154, Q:170, AW:3.5)

RESEARCH EXPERIENCE

Big Model related research |**THUNLP&BAAI |** Research assistant->ML Eng.: *March 2022-Present*

Advisor: Prof.**Zhiyuan Liu**, Tsinghua University, Beijing Academy of Artificial Intelligence (BAAI)

- Tool learning with foundation models, planning for Nature communication 2023
- Unifying Instruction Tuning with a style unification transferer, planning for NeurIPS 2023
- An Iterative Bootstrapping self-enhanced QA-pairs Generation framework, submitted to 2023 ACL
- Chinese LLM for long-form QA with accessing information from Web, submitted to 2023 ACL.
- Contributed to CPM-bee/CPM-live training and a writing helper system

Network Data Analysis of Shanghai Covid-19 lockdown |**MIT |** Online Workshop student: *June 2022-July 2022*

Advisor: **Munther Dahleh**, Professor at Massachusetts Institute of Technology, EECS

- Measured the lockdown policy effectiveness using **Network modeling methods** such as SEIR model network
- Designed a network **decision-making model** for covid-19 prevention with network clustering and centrality

Text to Speech for NLP |**Xu Tan in MSRA|** Remote Project student *July 2020-Aug 2020*

Advisor: **Xu Tan**, Researcher in Microsoft Research Asia, Machine learning Group

- Pre-trained and fine-tuned a Text to Speech model with a transformer method called **FastSpeech**
- Applied and test State-of-the-art Algorithms on texts data to transform it into human speech on several datasets

Reinforcement Learning for NLP |**Tsinghua University |** Research Intern: *Aug 2019-Feb 2020*

Advisor: **Zhiyuan Liu**, Associate Professor at Tsinghua University, Tsinghua Natural Language Processing Lab

- Researched Deep Reinforcement Learning methods for relation extraction problem
- Analyzed using Influence Function for wrong label problem of distant supervision in relation extraction

Interpretability of Deep Reinforcement Learning | CMU Robotics | Research Intern: *July 2018-July 2019*

Advisor: **Katia Sycara**, Professor at CMU Robotics Institute

- Proposed an enhanced **object saliency map** for interpretability of Deep reinforcement learning in Atari Games
- Applied **Influence** Method to analyze its training data for the overall importance during the training process
- Used New **Curiosity Method** for object attention in deep reinforcement learning for its transparency

PROFESSIONAL EXPERIENCE

Shenzhen Blue Sea Great Vision Tech Ltd. | Data and ML Engineer: *Sept 2020-Feb 2022*

- Built an AI **Recommendation System** using Deep Reinforcement learning deployed with Hadoop and Spark
- Maintain the IC and user Database and build an **information retrieval system** for thousands of clients
- Help finish an investment transaction worth over 700k dollars

Machine Learning in Data Science | **Coco Krumme** at UCB| Online Teaching Assistant *Sept 2018-Dec 2018*

- Served as a teaching assistant for the online course ***Machine Learning in Data Science*** for over 30 student

Intelligent Android platform for software testing | **Prof. Tao Xie** | Remote Project Student *Feb 2018-May 2018*

- Collected data for the **intelligent analysis** in Android software testing for **Prof. Tao Xie**, (UIUC->PKU)
- Applied some machine learning algorithms to classify different scenes in APP into different function types

Fake News Detection | Mike Tamir at UC Berkeley | Online Workshop Student *Dec 2017-Feb 2018*

- Led a team to design a 'Fake News Detector' with embedding methods such as TF-IDF, Word2Vec, Doc2Vec
- Our team achieved the highest score among 10+ student groups attending this project using Xgboost Algorithm

Machine Learning in Quantity Finance | City University of Hongkong | Intern *July 2017-Aug 2017*

- Applied Machine Learning Algorithms such as SVM, and Adaboost in Quantity Research for better investment
- Applied parallel methods on Machine Learning Algorithms in Amazon cloud server which ran 20 times faster

SKILLS&INTERESTS

- **Skills**: Python, Tensorflow, Pytorch, Linux, C++, Parallel programming with PyTorch, web crawler with python
- Research Interests: Natural Language Processing: QA, dialogue and KG, Deep Reinforcement Learning

AWARDS & HONOR

- 2022 Top50 Team in Kaggle 'Feedback' NLP Competition over 1500 teams, Silver Medal Prize
- 2022 Rank 157 over 1135 teams on the Google AI4Code competition in Kaggle
- 2021: Contributed to GitHub projects such as 'PLMPapers', and 'BMlist', earning about 3k stars
- 2019: Top 5 teams in **Amazon** Alexa Hackathon workshop at Carnegie Mellon University
- 2018: Honorable Mention prize in the **MCM/ICM** competition
- 2017: Rank 7th in the second round of **Big Data &Computing** Intelligence Contests out of 60 teams
- 2017: Second-Class Scholarship at Sun Yat-Sen University
- 2016: Third-Class Scholarship at Sun Yat-Sen University
- 2016&2017 Third-Class Prize in SYSU **ACM** Team-Selecting Algorithm Contest (twice)
- 2016: **PAT** (national algorithm test); Rank first in the TOP and Advanced level (1/973); Scores: 100/100
- 2015: As an Invited student to the Chinese selective exams of CMO (Chinese Mathematical Olympics)