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AWARDS

- 2021 **3rd**/22 **NAACL-BioNLP MEDIQA** Question Summarization task
- 2021 **5th**/368 **AICUP 2021** Medical Spring Competition
- 2020 **20th**/531 **AICUP 2020** Medical Fall Competition
- 2020 **5th**/16 **COLING-SMM4H** Medication Tweets Classification task
- 2019 **11th**/43 **ACL-BioNLP MEDIQA** Medical Text Inference task

EXPERIENCE

TAIPEI CITY FIRE DEPARTMENT | SUBSTITUTE SERVICES DRAFTEE

Dec 2021 – Jun 2022 | Taipei, Taiwan

- **Built an internal web service** for firefighters and civil servants to **search, analyze and visualize personnel information** using Python, Flask, MySQL, Nginx and Elasticsearch.
- Verified the 119 dispatch system's efficacy and reported back to its engineers.

NATIONAL CENTRAL UNIVERSITY (NCU)

| DEPARTMENT WEBSITE MANAGEMENT AND MAINTENANCE

Sep 2019 – Aug 2021 | Taoyuan, Taiwan

- Built new features for users to **apply for documents** and **book conference rooms** using Javascript, jQuery, MySQL and Python.
- **Troubleshoot** and **obtained logs from webserver** using Splunk.

INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE (ITRI)

| INDUSTRY-ACADEMIA COLLABORATION

Mar 2020 – Sep 2020 | Taoyuan, Taiwan

- Proposed a method to enhance the **Medical OCR error correction** rate by **7%** using self-built confusing word set. Did feasibility study of **ICD-10 Classification** using PLM and **NER** using **BiLSTM-CRF** which achieved a F1-score of **71.15%**.
- Cooperated with cross-domain experts to **design and implement frameworks and deep learning solutions**.

RESEARCH

INGRAINING DOMAIN KNOWLEDGE IN LANGUAGE MODELS FOR CHINESE MEDICAL QUESTION INTENT CLASSIFICATION | MASTER THESIS

- Proposed an **EKG-Transformers** (Encyclopedia enhanced pre-training with Knowledge Graph fine-Tuning Transformers) for **user intent multi-class classification of Chinese medical questions**.
- **Constructed CMID evaluation benchmark. Outperformed previous SOTA models** (MacBERT, RoBERTa, BERT, TextCNN, TextRNN, TextGCN and FastText). Examined the reasonableness and effectiveness of proposed method by **hypothesis testing** and **error analysis**.

PUBLICATIONS

- Chen, P. H., Zeng, Y. X., Lee, L. H. (2021, October). Incorporating Domain Knowledge into Language Transformers for Multi-Label Classification of Chinese Medical Questions. *ROCLING* (pp. 265-270).
- Lee, L. H., Chen, P. H., Zeng, Y. X., Lee, P. L., Shyu, K. K. (2021, June). NCUEE-NLP at MEDIQA 2021: Health Question Summarization Using PEGASUS Transformers. *NAACL-BioNLP* (pp. 268-272).
- Lee, L. H., Chen, P. H., Kao, H. C., Hung, T. C., Lee, P. L., Shyu, K. K. (2020, December). Medication Mention Detection in Tweets Using ELECTRA Transformers and Decision Trees. *COLING-SMM4H* (pp. 131-133).
- Lee, L. H., Lu, Y., Chen, P. H., Lee, P. L., Shyu, K. K. (2019, August). NCUEE at MEDIQA 2019: medical text inference using ensemble BERT-BiLSTM-Attention model. *ACL-BioNLP* (pp. 528-532).

EDUCATION

NATIONAL CENTRAL UNIVERSITY

MASTER OF ELECTRICAL ENGINEERING,
NLP LABORATORY

Sep 2019 - Aug 2021 | Taoyuan, Taiwan

Avg. GPA : 4.17, Department Ranking : 14 / 118

NATIONAL CENTRAL UNIVERSITY

BACHELOR OF MECHANICAL
ENGINEERING

Sep 2015 - Jun 2019 | Taoyuan, Taiwan

Avg. GPA : 3.49, Department Ranking : 6 / 39

SKILLS

TECHNICAL

Languages:

Python • C/C++ • JavaScript •
Matlab • R • HTML • CSS

Tools:

Pytorch • Keras(Tensorflow) •
Scikit-learn • Transformers •
Selenium • Pandas • CKIP • Jieba •
Regex • Gensim • OpenCC • SciPy •
OpenCV • Git • Docker • Kubernetes
• Nginx

Frameworks:

Flask • Django • Latex

Databases:

SQL(MySQL, SQLite, MSSQL) •
MongoDB • Elasticsearch • Neo4j

SOFT SKILLS

Enthusiastic • Communicative •
Honest

LICENSE

TOEIC **915**/990 Certificate

PROJECTS AND COURSES

GRADUATE

Text Mining (Biomedical&Social
Media&Military) • NLP (Classification,
Summarization, NER, QA) • Captcha •
Health Care System • Object
Recognition

UNDERGRADUATE

Self-propelled robot • AVR • 8051