江侑倫 Yu-Lun Chiang

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WORK EXPERIENCE

Natural Language Processing (NLP) Engineer
Jun 2020 – Present

Data Intelligence R&D Division, CTBC Bank, Co., Ltd.

• Tailor user's requirements and functional design to deliver a proof-of-concept prototype both on time and on quality.
• Survey state-of-the-art publications and techniques to build reliable software tools, applications, and services.

Research Assistant
Apr 2019 – Dec 2019

Natural Language Understanding Lab, Institute of Information Science, Academia Sinica

• Researched on natural language processing and understanding in the field of question answering.

SELECTED PROJECTS

Natural Language Processing

Sentiment Analysis for Financial News
May 2021 – Dec 2021

• Researched on Multi-Aspect Sentiment Analysis (MASA) and Zero-shot Learning.
• Collecting public financial news by own designed crawler called Sanga [code][pypi].

Keywords Extraction/Extension for Chinese Documents w/o the Paradigm of Finetuning   May 2021 – Dec 2021

• Proposed an embedding-based approach to extract and extend keywords for Chinese documents w/o any labeled data and fine-tuning.
• Implemented a PyPI source package called KeyExtractor [code][pypi].
• Pretrained a Chinese Word2Vec model [code] to extend words related to a given word.

Nested Named Entity Recognition for Chinese Electrical Health Records [code]
Jun 2020 – Jun 2021

• Researched on Named Entity Recognition (NER), especially for nested NER.
• Proposed a novel hybrid approach (mixing sequence labeling with question answering) to handle both flat and nested NER.
• Developed a functional module called seqhelper [code] to help evaluate sequence-labeling-based models.
• Uploaded Chinese fine-tuned NER models of this task on the huggingface model hub [url].
• Published a short paper in ROCLING 2021 [paper][slide].
• Gave a 30 mins talk on PyCon Taiwan 2021 [url][slide][video].

Question Answering System
Apr 2019 – Dec 2019

advised by Prof. Keh-Yih Su, NLU Lab, Academia Sinica

• Implemented a dispatcher model to decide a question that would be solved by which downstream modules, thereby obtaining what type of answers.
• Developed a textual entailment module that is one of downstream modules.
• Pilot run different SOTA models (BERT, XLNet, Roberta) on different QA datasets (DRCD, SQuAD and CommonSenseQA)
• Collaborated with four cross-functional teams to compete in FORMOSA GRAND CHALLENGE 2020.
• Collected and annotated data using active learning and an open source called doccano.

Internet of Things
Sep 2017 – Aug 2019

advised by Prof. Joe-Air Jiang, BEM Lab, National Taiwan University

• Master Thesis: On the monitoring and prediction for PM2.5 in urban areas [paper].
• Published a paper as a first author on Access Journal, IEEE (Mobile Measurement of Particulate Matter Concentrations on Specific Street in Urban Areas: Implementation and Field Verification) [paper].
• Published a paper as a first author on International Conference on Sensing Technology, ICST, IEEE (Urban Area PM2.5 Prediction with Machine Methods: An On-Board Monitoring System) [paper].
• Got an excellent paper presentation on International Conference on Sensing Technology (ICST), IEEE.

EDUCATION

Master of Engineering (Overall GPA 4.11/4.30)
Sep 2017 – Aug 2019

Dept. Bio-Industrial Mechatronics Engineering, National Taiwan University

Bachelor of Engineering (Overall GPA 3.83/4.30)
Sep 2013 – Jun 2017

Dept. Bio-Industrial Mechatronics Engineering, National Taiwan University

SKILLS

Programming (Python, Shell Scripts); **Libraries & Frameworks** (ML/DL, Pytorch, Transformers, Docker, Pytest, Git, Github Action CICD, Gitlab CI); **Firmware** (Raspberry Pi, Arduino)