Jeonghyeok Park

NLP ENGINEER

HOMEPAGE
jeonghyeokpark.netlify.app

EMAIL
qkrwjdgur09@naver.com

GITHUB
https://github.com/tmtmaj

CALL
+0086 13918432034

SUMMARY

Engineering graduate seeking an engineering position in **natural language processing (NLP)**. 3+ years of research and implementation in NLP, including data mining/preprocessing, machine translation, PrLM , etc. Strong background in CNN, RNN, GAN and experimental design experience using packages, like **Pytorch**, TensorFlow, Numpy, OpenNMT, Fairseq. 5+ years of programming experience with **Python**, Java, and C, and familiar with GPU/TPU programming and computer hardware.

SKILL, CERTIFICATION & OTHERS

- **SKILL**: Python, Pytorch (Fairseq, OpenNMT), Java, C, Linux, Aduino, Android
- **CERTIFICATION**: Engineer Information Processing (Korean license)
- **LANGAUGE**: Native Korean, Chinese (New HSK6 Level 219), English (TOEIC 795)
- **INTERESTS**: Programming, rap and guitar
- **IT BLOG**: Posting (in Korean) about NLP, programming, and others in my homepage.

PROJECT & INTERNSHIP EXPERIMENTS

[PROJECT] IT Convergence Guitar For Interactive Lesson, Research members, 2015.11~2016.11.

- Summary: The goal of GuitarSolo is to provide users with an effective guitar learning environment through multiple functions.
- My work is:

1. Develop android application program and data transmission algorithm between embedded system and application program
2. Find suitable sensors and design algorithms to improve the real-time recognition performance of guitars
3. Design and make models of special guitars (Guangzhou Delta Factory produces special guitars)
4. Design the main controller (Atmel'sCortex-M3familySAM3A8C) and develop embedded software (C/C++ language (ArduinoIDE))

- Paper & patent:

1. Real-time Recognition of Guitar Performance Using Two Sensor Groups for Interactive Lesson
2. Apparatus for Controlling Performance and Control Method Thereof

- Award:

1. 1st prize in 2016 KOREATECH Capstone Design Competition
2. Minister prize (Ministry of Trade, Industry and Energy of Korea) in 2016 E2FESTA (Engineering Education Festa)

[INTERN] Shanghai Yuebo Advertising Co., Ltd., Translation reporter, 2019.06~2020.02.

- My work is screening popular Chinese news and translating them to Korean.
- During this period, developed a system (Python) for automatically mining news information, which greatly improved the screening work.

EDUCATION

[MASTER] Shanghai Jiao Tong University, Computer Science and Technology, 2017.09~2021.02, Shanghai, China.

- Conference:
    1. PACLIC 33 in September 2019 and presented a paper presentation (3rd in PUBLICATIONS).
    2. IALP 2020 in November 2020 and presented a paper presentation (1st in PUBLICATIONS).
- Related courses: artificial intelligence, natural language processing, algorithm theory, advanced database technology.

[BACHELOR] KOREATECH, Information and Communication Engineering, 2011.03~2017.02, Cheonan, South Korea.

- Scholarship: outstanding student scholarship in 2015 (all subjects are all A+)
- Related courses: C/Java programming language, communications engineering, electronic circuits, and data communications.

PUBLICATIONS & PATENTS

1. **Korean Neural Machine Translation Using Hierarchical Word Structure**, Jeonghyeok Park and Hai Zhao. International Conference on Asian Language Processing (IALP 2020).
    - Propose an enhancement method that fully exploits the hierarchical Korean word embedding structure through 1D-CNN on Korean neural MT tasks, and achieve BLEU improvements (up to 0.6) compared to word-based baseline (Transformer).
2. **Collaborative Anomaly Detection for Internet of Things based on Federated Learning**, Seongwoo Kim, He Cai, Cunqing Hua, Pengwenlong Gu, Wenchao Xu, Jeonghyeok Park. IEEE International Conference on Communication in China. August 09-11, 2020.
    - Propose a federated learning(FL)-based collaborative anomaly detection system, and it achieves alleviating transmission latency and bandwidth demand, and robust privacy protection by sending parameter instead of raw data.
3. **Korean-to-Chinese Machine Translation using Chinese Character as Pivot Clue**, Jeonghyeok Park and Hai Zhao. 33rd Pacific Asia Conference on Language, Information and Computation (PACLIC 33).
    - Approach the problem by training a neural MT system to learn how to use Chinese char acters when provided with the input on Korean-to-Chinese translation tasks, and gain translations performance improvement (1.5 BLEU).
4. **Real-time Recognition of Guitar Performance Using Two Sensor Groups for Interactive Lesson**, Yejin Shin, Jemin Hwang, Jeonghyeok Park, and Soonuk Seol. TEI '18 Proceedings of the Twelfth International Conference on Tangible, Embedded, and embodied Interaction.
    - Propose a sensor-based guitar that consists of two groups of sensors for providing user effective and interactive guitar learning environments.
5. **Apparatus for Controlling Performance and Control Method Thereof (in Korean)**, Soouk Seol, Lee Jaeyeong, Park Jeonghyeok, Park Jinuk, Han Yumin (10-2016-0156882/10-1836332).