Seungwon Kim

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EDUCATION

- **Georgia Institute of Technology** — Atlanta, GA
  Master of Science in Computer Science; GPA: 4.0/4.0 — *Jan. 2019 – Dec. 2020*

- **Kyungpook National University** — Daegu, South Korea
  Bachelor of Engineering in Electronics; GPA: 3.3/4.0 — *Mar. 2009 – Feb. 2016*

PROFESSIONAL EXPERIENCE

- **Incheon International Airport Corporation** — Incheon, South Korea
  Data Scientist — *Mar 2024 - Present*
  - **Predictive Modeling for Passenger Flow**: Designed and implemented predictive models to optimize the overall passenger check-in process. Improved the time complexity of the passenger flow prediction model from $O(n^2)$ to $O(n \log n)$.

- **Incheon International Airport Corporation** — Incheon, South Korea
  Electrical Engineer — *Dec 2015 - Present*
  - **Surface Movement Guidance and Control System (SMGCS)**: Maintained and optimized the airport's SMGCS for safety compliance and operational efficiency. Conducted regular system assessments and troubleshooting to enhance reliability, resulting in a 77% reduction in aircraft runway incursions.
  - **Short Term Load Forecast**: Developed and implemented a moving average model combined with linear regression and neural networks using Python and TensorFlow, achieving a prediction accuracy of only a 2.03% error rate in peak load forecasts.

PUBLICATION

- **Revisiting Pretraining with Adapters**
  Seungwon Kim, Alex Shum, Nathan Susanj, Jonathan Hilgart.
  Accepted at ACL 2021 Representation Learning for NLP Workshop. **Best Paper Award**

- **Using Pre-Trained Transformer for Better Lay Summarization**
  Seungwon Kim
  Accepted at EMNLP 2020 Scholarly Document Processing Workshop

PROJECTS

- **Computational Linguistics Lay Summary Challenge 2020** — May - Aug 2020
  https://competitions.codalab.org/competitions/25516
  - Designed and implemented lay summarization models for scholarly documents using Pytorch, with a focus on extractive, abstractive summarization and proposed readability metrics. Achieved 2nd rank out of 8 participants in the Computational Linguistics Lay Summarization Challenge 2020.

- **Neurips 2019 Reproducibility Challenge** — Nov - Dec 2019
  https://github.com/seungwon1/BEAR-QL — *Report: https://openreview.net/forum?id=S1lXO6cf6S*
  - Implemented BEAR (Off-policy Q-Learning via Bootstrapping Error Reduction, Kumar et, al. 2019) algorithms from scratch using pure Tensorflow. Reproduced and performed all the experiments in Kumar et, al. 2019 and wrote the reproducibility report for the comparison.

PROGRAMMING SKILLS

Languages: Python, C++, Java
Backend: Flask, FastAPI, SQL, MySQL, PostgreSQL
ML/AI: PyTorch, TensorFlow, PEFT
DevOps-Tools: Git, Docker
Competitive Programming: Meta Hacker Cup 2023 Round 2 (Rank 743 out of 20,000+, Top 3.7% globally)