

Yeonsook Kwak

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With over 10 years of experience bridging two distinct yet complementary fields, I bring a unique blend of expertise in both data science and manufacturing research engineering. Over the past 3 years as a Data scientist and Analyst at Kware Inc., I have led data-driven projects, performed comprehensive data analyses, and collaborated on developing end-to-end models.

EDUCATION

Swiss Institute of Artificial Intelligence

Swiss

Master of Datascience and Business

Feb. 2022 - Sept. 2024

- Courses : Math & Stat I,II, Scientific Programming, Machine learning, Deep learning, AI in business Cases

Konkuk University

South Korea

Bachelor in Nano Science and Technology

Mar. 2007 - Feb. 2011

- Courses : Quantum mechanics, Mathematical Physics, Basic programming and signal processing

WORK EXPERIENCE

Data Analyst & Scientist

Kware Inc. - ICT department, South Korea

Feb 2020 - Nov 2022

- **Data driven in B2G project and owned service Project** : Built the entire animal disease analytics pipeline from scratch starting from movement tracking to a real time dashboard. Building the interior service platform's data part by training classifiers for categorizing interior categories with referenced platform user dependent data. Deploying the alert engine for animal disease risk with NLP NER classifier and Bayesian model.

Assistant research engineer

Charmtron Inc., South Korea

May 2016 - Dec 2018

- **Developing Carbon nano materials** (Developing Graphene materials with focus on pathways to conductivity improvement. Duties include technology transfer, production start-up.), **Developing for Thermal CVD process**(Participating R&D projects for growing the EMI/EMC Graphene sheet)

Assistant research engineer

Unidymasia Inc.(Wisepower Inc.'s affiliates), South Korea

Dec 2012 - Mar 2015

- **Development work on carbon nanotubes (CNTs)**: Duties include technology transfer and development. analysis for the experimental data Responsible for Carbon Nanotube (CNT)-based Transparent Conductive Films (TCF) and ink product integration and customer interactions.

Research engineer

Wisepower Inc., South Korea

Jan 2011 - Nov 2012

- **Participate Government projects** (Developing High CRI LED which are applied to broadcast lights), **Experiment and analysis**(Do product-reliability test with a simulation program, Testing the materials, in particular, phosphor analyzing joined with external phosphor company)

PROJECTS

- **Interior domain platform - data part**, Scraping the interior & remodeling data and do summarization and Q&A project 20212022.(NLP, data preprocessing) (- Sep 2022)
- **Ministry of Environment Disease Alert Module (NLP, Web Crawlers, Multimedia Processing)**, adjust entity extractor even though with small dataset & alarm API. (- Mar 2021)
- **News Scraping & target word extraction**, Reuter news scraping & naive Bayesian model for word extracting in simple pattern text. Do A/B testing whether using ensemble model or single model(Mar - Aug 2020)
- **Migratory bird clustering Module**, 2nd step clustering module for Korea migratory bird GPS data(time dependent classifying first, position dependent classifying - company's animal disease platform servicing now.). (Feb - June 2020)
- **Weather data processing**, checking the wrong sensor data and implementing or processing with Naive Bayesian model. (Feb - Mar 2020)

PUBLICATIONS - MASTER DISSERTATION

- Sleep state detection method by data-generated likelihood [Based on the research of SIAI's thesis, the Institute of Data Science and Management contributed a series of articles on sleep state detection (by Yeonsook Kwak).] : Won the Best paper of the year award https://kr.giai.org/research_category/giaikr-paper-story/

TECHNICAL SKILLS

Programming Languages: Python, R

Libraries and Tools: PyTorch, Sklearn, Pandas, Numpy, Git, Docker, PostgreSQL, Tableau