Kyungrin Noh

Data Scientist, Global Business Services, IBM Korea

Contact

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Skills

Development skills

- Machine Learning
- Optimization
- Text Analysis
- Server Setup/Mgmt.

Development tools

- Python
- Java
- SQL
- Django
- Shell Scripts

Project skills

- Scheduling
- Management
- Presentation

Languages

- Korean (Native)
- English (Fluent)

Currently working as data scientist/consultant in Global Business Services, IBM Korea for 4+ years. Main work includes, but is not limited to, machine learning/optimization model development, analytics server development in Amazon Web Services, data analysis in various industries, and project management.

Work Experience

2017 - Now **Global Business Services, IBM Korea**
Data Scientist / Senior Consultant

- **V-automotive group. Data Strategy Consulting** – *Nov. 21 / Jan. 22*
  Project Leader / Lead Data Consultant
  - Analyzed data quality, ownership, metadata, and architecture of the enterprise, to suggest proper data governance framework and sroadmap.
- **V-service. Cognitive Workforce Management** – *Jun. 21 - Sep. 21*
  Project Leader / Lead Data Scientist
  - Developed a python model to measure employee's fitness to open positions in business sites.
  - Developed Django application server and Oracle DB instance in AWS for REST API service of the fitness measure model.
  - Implemented word embedding machine learning module, *fastText*, to compare required skills with employee's career.
- **A-hospital. Automated Nurse Scheduling** – *Oct. 20 - Mar. 21*
  Project Leader / Lead Data Scientist
  - Developed a *Genetic Algorithm* model to solve a NP-hard Nurse Scheduling Problem.
  - To enable tight scheduling, rule-based fitness function and sequential optimization steps were introduced.
  - PyPy3 interpreter and Multiprocessing were used to make the model converge fast enough for daily 100+ user access.
- **A-hospital. Automated Bed Allocation** – *Feb. 20 - May. 20*
  Project Leader / Lead Data Scientist
  - Developed a python model to automatically allocate beds to inpatients based on their registration and medical conditions.
  - Implemented the *Genetic Algorithm* to follow necessary allocation standards and produce the most optimized solution.
    [Press release *(English / Korean)*]
- **H-insurance. AI Claim Processing** – *Dec. 18 - Mar. 19*
  Data Consultant
  - Supported development of the automated insurance claim processing model, using the machine learning module of the IBM Watson solution.
- **S-financial group. AI Market Forecasting** – *Jan. 18 - Sep. 18*
  NLP Developer
  - In charge of the IBM Watson solution implementation.
  - Performed *Named-Entity Recognition* from 20+ years of news/ blog/report data, to utilize text data in market forecasting.
    [Press release *(English / Korean)*]

2017 **Bio-Synergy Research Center, KAIST**
Research Associate

- Conducted in silico research on drug candidates from natural products and their effects in human metabolic pathways.

Education

2015 - 2017 **Bio-Information System Laboratory, KAIST**
Master of Science

- **Major:** Bioinformatics
- Researched on drug discovery from natural products based on their similarity to human metabolites. Main activities include machine learning model development, network analysis on metabolic pathways, and molecular similarity calculation.
  [Graduation thesis - Finding pharmacological effects of human metabolites and their similar natural products]

2009 - 2015 **Department of Biological Sciences, KAIST**
Bachelor of Science

- **Major:** Biological Sciences
- With the curriculum mainly focused on Genetics, Biochemistry, and Molecular Biology, conducted individual research on targeted anti-tumor drug delivery.
  [Graduation thesis - Anti-tumor drug delivery via targeted yeast vacuole system]

2007 - 2009 **Hankuk Academy of Foreign Studies, Yongin, Korea**

2006 - 2007 **Calera High School, Alabama, USA**

Publications

- K Noh & S Yoo, D Lee. 2018. **A systematic approach to identify therapeutic effects of natural products based on human metabolite information.** *BMC Bioinformatics, 19.* https://doi.org/10.1186/s12859-018-2196-0.
- S Yoo, K Noh, M Shin, J Park, KH Lee, H Nam, D Lee. 2018. **In silico profiling of systemic effects of drugs to predict unexpected interactions.** *Scientific Reports, 8.* https://doi.org/10.1038/s41598-018-19614-5.
- S Yoo, S Ha, M Shin, K Noh, H Nam, D Lee. 2018. **A data-driven approach for identifying medicinal combinations of natural products.** *IEEE Access, 6.* https://doi.org/10.1109/ACCESS.2018.2874089.
- M Shin, S Yoo, S Ha, K Noh, D Lee. 2015. **Identifying Potential Bioactive Compounds of Natural Products by Combining ADMET Prediction Methods.** *Proceedings of the ACM Ninth International Workshop on Data and Text Mining in Biomedical Informatics.* https://doi.org/10.1145/2811163.2811168.
- S Ha, K Noh, M Shin, S Yoo, J Choi, H Nam, D Lee. 2015. **Identifying multi-component drug candidates in natural products via association rule mining.** *Chinese Journal of Pharmacology and Toxicology, 1.*
- S Yoo, J Choi, M Shin, S Ha, K Noh, H Nam, D Lee. 2015. **Integrative database for multi-compound drug discovery in complementary medicine.** *Chinese Journal of Pharmacology and Toxicology, 1.*

Achievements

Oct. 2020 **Lecturing at Chonnam National Univ.**

- Lectured on analytics project management in business fields.

Jul. 2020 **Lecturing at IBM P-TECH School**

- Lectured on career path of data analyst/scientist.

2009 - 2011 **Interpreter at ROK-US Combined Forces Command**

- Received Army Commendation Medal from US division chief.