Resume for Kyungdon Choi

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OBJECTIVE

I am interested in the user specification problem. Nowadays, thanks to the distribution of portable devices such as tablet PC or smartphone, the company can easily collect consumers' behavioral log data, therefore, the firm can easily detect consumer's specific behavior and optimize targeting, segmenting, or recommending relevant products for each consumers with personalizing. I want to reveal and analyze consumer's behavior to increase their welfare. For example, there is a consumer who want to buy a new bike. If the company recognizes the user's need and send a notification to him for availability of the appropriate bike that he would prefer, his experience would be leveraged and the company would grasp the consumer's retention, which brings both win-win situation. To achieve the goal, I graduated mathematical science to improve logical mind and entered business collage to improve intuition for real-world problem related to the real-business and analysis skill. Now, I am also interested in tree-based Machine Learning (such as Random Forest, XGBoost, etc) or Deep Learning approaches (MLP, RNN, etc) to analyze and predict consumers' behavior, too.

INTERESTED AREA

Marketing, Salespeople, Artificial Intelligence, Promotion, Causal Machine Learning

CORE SKILLS

Python (2016.08 -), Econometric Model (2020.03 -), Torch Framework (2020.12 -)

EDUCATION

UNIST Ulsan, Ulju-gun
Bachelor of Mathematical Science, (minor for Computer Science) GPA: 3.98/4.3 2016 - 2020

KAIST, college of business Seoul, Hoegi
M.S. of Management Engineering, Marketing Science GPA: 3.99/4.3 2020 - 2022

KAIST, college of business Seoul, Hoegi
Ph.D. of Management Engineering, Marketing Science 2022 - ing

WORK EXPERIENCE

Class 101 Seoul
Data Analyst 2019.12 – 2020.08

- I constructed basic metric for purchase KPI and learning KPI through Redash, Tableau, etc.
- I conducted quasi-experiment to improve students' learning retention and analyse the true effect.
- I assisted Data Engineers to build ETL process, using PySpark environment to efficiently manage the queries in the management DB.

PROJECT WORK

Club Activity *Mentor for High School Student* 2017.03 - 2017.12

- I taught basic python skills to the student, and connection with Raspberry Pi.

Club Activity *Internal Seminar* 2018 Fall

- I presented the infinitude of prime number, using topological methods.
- I also presented the existence of victory strategy for Extensive-form game, which is the lattice of Game Theory

Teaching Assistant *Calculus I* 2017, 2018, 2019 Spring

- I taught the basic concept of calculus such as $\epsilon - \delta$ method, differentiation, integration, Taylor series or else

Teaching Assistant *Calculus II* 2018, 2019 Fall

- I taught the basic concept of vector calculus such as basic topology, level surface, Jacobian matrix or else

Teaching Assistant *Advanced Calculus II* 2019 Fall

- I taught the advanced concepts for Calculus II in aspect to Mathematics major. Especially I taught advanced topology, precise concept of differentiation, integration, and Stokes' Thm

Interdisciplinary Project *Modular Form Seminar* 2019.07 - 2019.12

- I have learned the basic concept of modular form, which is the complex function invariant under group action of $SL_2(Z)$

Laboratory Project *Targeting on card company* 2019.08 - 2019.12

- I assisted master candidate senior to preprocess the users' log data before constructing machine learning model to predict users' push notification sensitivity
- In the project, we used multilayer perceptron, logistic regression, and random forest model in scikit-learn library to construct model, and statsmodels library to reveal statistical significance for the variables

Laboratory Project *Targeting on card company* 2021.12 - 2022.02

- I assisted the Ph.D candidate senior to preprocess the users' log data before constructing statistical model to predict users' message open rate
- In the project, we used Hierarchical Bayesian Mixed Logit, which is a part of econometric model using Bayesm, provided in R programming.

EXTRA SECTION

Open Lecture *Differential Equation* 2017 Spring
Open Lecture *Calculus II* 2017, 2018 Fall
Open Lecture *Calculus I* 2018, 2019 Spring
Club Activity *Mathematics & Physics Club Lead* 2017.01 - 2017.12
Club Activity *Boardgame Development Member* 2017.03 - 2018.03
Club Activity *Boardgame: Project MINE Founder* 2019.03 - 2020.06
Volunteer *Gwacheon Science Museum* 2018 Summer
Presentation *KMMA Graduate Fall Competition* 2021 Fall

OTHER SKILLS

Mathematics (Linear) Algebra, Algebraic Topology, Number Theory and Functional Analysis
Database SQL, No-SQL (Mongo DB)
Big-Data Analysis PySpark
Machine Learning & Statistic scikit-learn, statsmodels, pandas