Jeonghoon Kim

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EDUCATION

University of Minnesota, Twin Cities **(*Expected) May 2023*
- Bachelor of Science and Engineering - Computer Science Major *GPA 3.5/4.0*

TECH WORK HISTORY

University of Minnesota, Twin Cities
Knowledge Computing Lab - Assistant Researcher *Jan 2023 – May 2023*
- Participated in Prof. Yao-Yi Chiang's research; Text Detection and Recognition in Historical Maps

Tesser Inc, Seoul, South Korea
Corporate R&D Center - Data Scientist (Assistant) *May 2022 – Sept 2022*
- Extracted desired data from clinical trial websites using the Automation Python library
- Conducted exploratory data analysis (EDA) on clinical trial data using Pandas and Seaborn Python libraries.
- Preprocessed clinical trial data to make it feasible for machine learning models, achieving over 70% accuracy.
- Separated clinical trial data using the K-means clustering algorithm optimized with silhouette coefficient.
- Performed hyperparameter tuning using Wandb.
- Deployed a deep-learning model to build an API using Streamlit.

Data Engineer *March 2021 - Dec 2021*
- Achieved over 95% accuracy with XGBoost, CatBoost, and LightGBM for inferring on five incurable diseases with medical checkup data.
- Generated word clouds by extracting interesting features using Latent Dirichlet Allocation among posts on the cancer community.
- Converted text into vectors using distributed prediction-based embeddings from the extracted text data using PyPDF2.
- Built an RNN model that generates names with a character-level RNN based on languages using PyTorch.
- Documented the REST API thoroughly using comments and graphs.
- Refactored the REST API structure for better readability and cost-effectiveness.

PROJECTS

Drone Simulation Sprint Group Project (https://github.com/junghun-K/csci3081w-project)
- Implemented a taxi meter that deducts the fare from the robot's wallet after dropping it off at a desired location.
- Applied various design patterns in C++, including the Decorator pattern.
- Spearheaded the project with the Decorator design pattern, planning with UML diagrams and implementation.
- Conducted peer code review using Github.

My Website (servers, ver 1: PythonServer, ver 2: NodeJS)
- Implemented the front-end web pages using HTML/CSS/JavaScript.
- Generated contact management interacting with a database hosted on CSELab machine.
- Utilized two public APIs to find the location and current weather from the found location.
- Designed a pure HTTP request/response server.
- Tested possible requests with Postman.

To-Do-List (https://github.com/junghun-K/To-Do-List)
- Generated a server with the Express.js framework and MySQL to store, filter, remove, and update items in a database.
- Utilized user interactions to change the status of an item without reloading.

SpaceMineSweeper
- Generated a SpaceMineSweeper game that destroys mines using TypeScript.

ACTIVITIES

- Idea Bank; Ideas of Business models based on the worldwide problem and daily life
- Directed the promotion of Tesser Inc.'s product at the LA festival to over 300 people.
- Completed military service in the Republic of Korean Army.
- Played as a midfielder in the Korean Soccer Team at UMN.

TECHNICAL COURSEWORK

- Machine Learning
- Data Mining
- Operating Systems
- Interactive Graphics & Games
- Natural Language Processing
- Database System & Management
- Algs. & Data Structure
- Artificial Intelligence
- Discrete Structures
- Program Design & Development

SKILLS

- **Programming Languages**: Python, PyTorch, Tensorflow, JavaScript, TypeScript, JAVA, C, C++, SQL, HTML/CSS/JS, PUG
- **Developer Tools**: VSCode, Jupyter Notebook, Github, Unix/Linux, Postman, Docker, Agile, Wandb
- **Technical Skills:** Web Scraping, EDA, REST API, Modulization, Optimization, Thread Management
- **Technology & Frameworks**: Node.js, Express.js, MySQL, PostgreSQL