Seokhyun An

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INTERESTS	**Inspire, individualize and empower people by technology** Machine Learning, Computer Vision, Natural Language Processing and Business

EDUCATION

Ulsan National Institute of Science and Technology (UNIST) Mar 2021 – present
- Undergraduate student in School of New UNISTars
- Candidate for B.S. in Computer Science and Engineering
- Admission with distinction (full tuition waiver + $5,000 credit as award)

Daejeon Dongsin Science High School (DDSHS) Mar 2018 – Feb 2021
POSTECH Creative Entrepreneur Omphalos (PCEO) Feb 2017 – Jan 2019

HONORS & AWARDS

Academic Performance Scholarship, UNIST, 2021
Entrance Scholarship of Distinction for Study Abroad, UNIST, 2021
Best Project Award, POSTECH, 2017–2018

RESEARCH EXPERIENCE

Development of Emotion Recognition Wearable Device, KAIST Nov 2019 – Jan 2020
The goal of this study is to develop a wearable device that predicts emotions using biosignal data. Our team configured a watch-type wearable device with GSR sensor, PPG sensor, and communication module. I implemented a Support Vector Machine (SVM) to classify emotions using GSR signals and PPG signals. I utilized an rbf kernel technique for classifying two-dimensional data by projecting it into a high-dimensional space. I obtained the SVM training data by playing music that evokes certain emotions to six people in a controlled environment in a certain pattern. To improve training efficiency and prevent overfitting, the measurements were normalized based on biosignal of calm emotions, and the preprocessed data was classified into four emotions(angry, tired, excited, calm).

Naive Bayes Classifier for Predicting Mood of Novel, DDSHS Feb 2020 – Jan 2020
The goal of this study is to predict the mood of the novel through textual data from the novel. I made a set of English words by tokenizing 50,000 IMDb movie review dataset. Using the score of the review, I calculated the probability that a sentence is a positive sentence and a negative sentence for each of the words when a word is included in any sentence. I constructed a prediction model based on likelihood, taking advantage of the posterior probability and likelihood being proportional when assuming conditional independence by Bayes theorem. To improve prediction model accuracy, I use chat corpus to calibrate the prior probabilities, and also consider the probabilities for the synonym words.

PROJECTS

Development of Content Recommendation Service based on Emotional Data
This project started with the recognition of the problem that the bias in machine learning-based content recommendation algorithms harms individuality. So, I created a service that recommends content based on emotion data, which is data that can be used as a factor of personalization of recommendations and cannot be biased. The user's emotions were recognized through our own emotion recognition wearable device. The service is implemented up to the real-time emotion recognition system and front-end UI/UX.

LEADERSHIP & GROUPS

Student President, DDSHS, 2020
President, iLogics(Computer Science Club @DDSHS), 2019 – 2020
Member, HEXA(Computer Science Club @UNIST), 2021 – present

TECHNICAL SKILLS

Moderate – Python, C, Adobe XD
Novice – Go, HTML, LaTeX