

Swanie Juhng

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swaniejuhng.github.io

EDUCATION

Stony Brook, NY	Stony Brook University	Aug 2020 – Expected May 2025
• Ph.D. Candidate in Computer Science. Research Area: NLP + Psychology. CGPA: 3.87/4.0		
Seoul, Korea	Sogang University	Mar 2015 – Feb 2020
• B.S. in Business Administration and Computer Science. CGPA: 3.34/4.0		

EMPLOYMENT AND EXPERIENCE

Research Assistant	Stony Brook University	May 2021 – Ongoing
• Currently building a Transformer architecture that leverages time series data to predict binary level of depression and anxiety. • Built generative language models that produce texts conditioned on Big Five personality traits and mental health variables; in the process of writing manuscript.		
IITP-Purdue Software Program	Purdue University	Jun 2018 - Aug 2018
• Was selected as the participant of a 7-week summer software program and funded by IITP (South Korea government institution).		

PUBLICATIONS

- Discourse-Level Representations can Improve Prediction of Degree of Anxiety.** ACL 2023.
- Built a novel neural network architecture that utilizes discourse-level and contextual embeddings of the Facebook status updates to predict the users' degree of anxiety.
 - Explored theoretically relevant discourse relations to explain what the model is able to capture.
- Transfer and Active Learning for Dissonance Detection: Addressing the Rare-Class Challenge.** ACL 2023.
- Used and compared different active learning strategies to build a dataset for cognitive dissonance classification task.
 - Examined the usefulness of transfer learning in addressing the rare-class problem when training a RoBERTa-based classifier.

PROJECTS

- Gender and Mental Health.** Big Data Analytics, 2022.
- Used language-based mental health prediction models on the County Tweet Lexical Bank dataset to find the correlations between mental health, gender, and population density.
- World Happiness & Alcohol Consumption.** Visualization, 2021.
- Built an interactive dashboard that visualizes correlation between variables with respect to happiness and alcohol consumption.
- Document-Level Sentiment Analysis.** Natural Language Processing, 2020.
- Explored several methods built on the DistilBERT-based classifier to predict an author's sentiment towards a main entity in an article.
- Waggle Power Management System.** IITP-Purdue, 2018.
- Constructed an autonomous power management system using socket programming and Raspberry Pi to enable Waggle (wireless sensor platform) survive in rural environments.

KEY SKILLS

Languages Python; C/C++; Java; JavaScript; Shell; L^AT_EX
Tools PyTorch; TensorFlow; MySQL; Hadoop; Spark; D3.js

EXTRACURRICULAR ACTIVITIES

President

Korean Graduate Student Assn

May 2022 – Ongoing

- Organized events and managed social media account to foster interaction between students.
- Provided help to incoming Korean students settling down in a new environment.