Swanie Juhng

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Education

Stony Brook, NY	**Stony Brook University**	**Aug 2020 – Expected 2025**

- Ph.D. Candidate in Computer Science. CGPA: 3.87/4.0

Seoul, Korea	**Sogang University**	**Mar 2015 – Feb 2020**

- B.S. in Business Administration and Computer Science.

Employment and Experience

Research Assistant	**Stony Brook University**	**May 2021 – Ongoing**

- Built a novel neural network architecture that utilizes discourse-level and contextual embeddings to predict the Facebook users' level of anxiety based on their status updates; submitted the paper to EMNLP 2022.
- Built dataset to gain a better understanding of cognitive dissonance using discourse parsing and active learning; trained RoBERTa-based classification model.
- Built generative language models that generate texts conditioned on Big Five personality traits and mental health variables such as depression, anxiety, and life satisfaction; submitted the paper to PNAS.

Teaching Assistant	**Stony Brook University**	**Aug 2020 – May 2021**

- CSE 320 System Fundamentals II (Spring 2021): Held office hours twice a week to help students complete five assignments; wrote a grading program using Criterion to check validity of submitted assignments.
- CSE 260 Computer Science B: Honors (Fall 2020): Helped students understand the basics of data structures and algorithms by explaining how to solve given problems in Java.

Programming Tutor	**Sogang University**	**Sep 2017 – Dec 2019**

- COR 1009 Computational Thinking (Fall 2017 - Fall 2019): Helped students understand the basics of programming and learn Python grammar.

IITP-Purdue Software Program	**Purdue University**	**Jun 2018 - Aug 2018**

- Selected as a participant of a 7-week summer software program and funded by the Institute of Information & Communications Technology Planning & Evaluation.
- Built an autonomous power management system with assistance of professors from CNIT department.

Social Entrepreneurship Workshop	**Loyola Marymount University**	**Jan 2016**

- Designed a social business model involving upcycling.
- Attended seminars on Social Entrepreneurship; visited social enterprises and companies that engage in Corporate Social Responsibility.

Technical Experience

Projects

- **Gender and Mental Health** (2022). Used RoBERTa-based dissonance classification model, anxiety prediction model, and PySpark on the County Tweet Lexical Bank dataset to test the hypotheses that 1) women are more likely to show high level of anxiety and cognitive dissonance at high frequency, and 2) such phenomenon is more prevalent in rural areas than urban areas. such phenomenon is more prevalent in rural counties
- **Visualization of World Happiness & Alochol Consumption** (2021). Merged two datasets and built an interactive dashboard that visualizes correlations between happiness variables and metrics of alcohol consumption.
- **Document-Level Sentiment Analysis** (2020). Explored several methods built on the DistilBERT classifier to predict an author's sentiment of a main entity in an article.

- **Adult Dataset Classification** (2020). Used three classification methods to reveal if personal background has control over income; evaluated the strengths and weaknesses of the methods.
- **Waggle Power Management System** (2018). Construct an autonomous power management system to enable Waggle (a wireless sensor platform) to survive in non-urban environments with insufficient network and electricity support, using socket programming and Raspberry Pi.

Key Skills

- **Languages** Python; C/C++; Java; JavaScript; Shell
- **Tools** PyTorch; TensorFlow; D3.js; MySQL; Hadoop; Spark