LU ZHANG

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EDUCATION

• Hanyang University, South Korea

Mar 2021 - Aug 2023

Master's Degree in Applied AI

Thesis: Detection and Measurement of Illicit Promotional Content on Chinese TikTok

• Dankook University, South Korea

Mar 2019 - Feb 2021

Bachelor's Degree in Software Science

GPA: 3.41/4.5

GPA: 3.95/4.5

Thesis: A Deep Learning-Based Method for Enhancing Instagram Influencer Advertising

• Cheju Halla University, South Korea (Joint Program with Hefei University, China) Sep 2014 - Aug 2017 Associate Degree in Computer Technology GPA: 3.57/4.5

RESEARCH INTERESTS

Applied AI for Security&Privacy, Computational Social Science, Social Media Analysis&Measurement

PROFESSIONAL EXPERIENCE

• Machine Learning Engineer

Jan 2024 - Present

Department of AI Technology at Globit Co., Ltd, South Korea

• Data Science for Social Good fellow

Jun 2023 - Aug 2023

Data Science for Social Good fellowship at the University of Warwick, UK

• Research Assistant

Feb 2021 - Aug 2023

AI-Cybersecurity Lab at Hanyang University, South Korea

SELECTED PROJECTS

• Deep Learning-Supported Flounder Individual Identification&Tracing System Dec 2023 - Present

Constructing a deep learning-based pipeline to identify flounder individuals in fishing farms using CCTV cameras and enabling re-identification from consumers' side with a phone camera

• Investigate 'Insulting China'-Related Content on Chinese Social Media

Oct 2023 - Present

- Conducting a pilot study to analyze related phenomenon on Chinese social media
- Writing a systematic review of computer-supported technologies on related memes
- Built a crawler to scrape related contents on Chinese mainstream social platforms (Weibo, Douban, Tieba, Douyin)
- Identify Greenwashing Posts on Social Media [Poster]

Jun 2023 - Sep 2023

- Constructed a pipeline for preprocessing, training, experimentation, and inference based on the data provided by stakeholders
- Made image and text classifiers to identify Green Messaging (F1-score: 0.79 and 0.83) of posts on mainstream social media platforms
- Calculated the potential of companies engaging in Greenwashing
- Detect&Measure Illicit Promotion on Chinese Short Video Platforms [Slides] Apr 2022 May 2023
 - Crawled 100k+ posts with meta data from Chinese TikTok
 - Case study of illicit content
 - Qualitative analysis with creating a qualitative codebook and conducting expert interviews for ascertaining illicit jargon characteristics and data labeling strategies

- Built a hybrid mechanism to detect (F1-score = 0.90), measure, and mitigate posts with Illicit Promotional Content on Chinese TikTok

• Deep Learning-Supported Tympanic Membrane Diagnosis

Aug 2021 - Mar 2022

- Conducted preliminary research and pilot study; discussed with physicians from Korea University Ansan Hospital to clarify particular tasks and feature selection
- Segmented the boundary of eardrum images with U-Net
- Classified eardrum images by 3 diseases with EfficientNet

TECHNICAL SKILLS

Programming Languages Python, Shell Script, JavaScript

Tools Git, Docker, LaTeX, Tableau, Weights&Biases, MySQL, CSS, HTML

AI-Related Frameworks Pandas, Numpy, PyTorch, OpenCV, Scikit-learn, Hugging Face, NLTK, Gensim,

SpaCy, AutoML, Matplotlib, Seaborn

Automations Crawler, Pyspider, Scrapy, Selenium, Pytest, PyAutoGUI

Natural Languages Chinese (Native), English (C1), Korean (B2)

AWARDS

Fellowship	Data Science for Social Good @ University of Warwick	2023
2nd Prize	Three Minute Thesis (3MT [®]) Competition @ Hanyang University	2023
Travel Grant	DAAD (German Academic Exchange Service) Data Science Summer School @ Heidelb	erg2022
Excellence Prize	ERICA English Essay Contest @ Hanyang University	2022
Distinction Prize	ERICA English Essay Contest @ Hanyang University	2021
Fellowship	Brain Korea 21 (BK21) program for Leading Universities and Students	2021

PUBLICATIONS

- Lu Zhang, et al. Understanding Illicit Promotional Content on Chinese TikTok, In Submission
- Lu Zhang, Yeonjoon Lee. Detection Techniques for Chinese Jargon: A Survey, The Korean Institutes of Communications and Information Sciences (KICS) Winter Conference 2023
- Lu Zhang, Yeonjoon Lee. Stealthy and Seductive: A Survey on Online Illicit Promotion, Conference on Information Security and Cryptography-Summer 2022 (CISC-S'22)
- Lu Zhang, Hoon Ji, Yeonjoon Lee. A Survey on Deep Learning-based Eardrum Segmentation, 2022 International Conference on Electronics, Information, and Communication (ICEIC 2022)

VOLUNTEERING

• Member&Freshman Mentor

March 2019 - Jan 2021

Dankook University International Student Association

Updated: $Friday2^{nd}$ February, 2024