# LU ZHANG

#### RESEARCH INTERESTS

Applied AI for Security, Computational Social Science, Data-Driven Social Media Analysis&Measurement

#### **SKILLS**

Programming Languages Python, Shell Script, JavaScript

Softwares Git, Docker, LaTeX, Tableau, MySQL, CSS, HTML

Tools Crawler, Selenium, PyTorch, OpenCV, Scikit-learn, Hugging Face, Spacy, AutoML

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

#### **PROJECTS**

## June 2023 - Sept 2023 Identify Greenwashing Posts on Social Media

- 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 given companies/sectors for being Greenwashing

## April 2022 - May 2023 Detect&Measure Illicit Promotion on Chinese TikTok

- Crawled posts with meta data from Chinese TikTok
- Case study + qualitative analysis with codebook and expert interview
- Built a hybrid mechanism to detect (F1-score = 0.90), measure, and mitigate posts with Illicit Promotional Content

### August 2021 - March 2022 Korea University Ansan Hospital Tympanic Membrane Project

- Conducted preliminary research and pilot study
- Segmented the boundary of eardrum images with U-Net
- Classified eardrum images by 3 diseases with EfficientNet

## **EXPERIENCE**

- Data Scientist Intern June 2023 August 2023 Data Science for Social Good fellowship at the University of Warwick
- Research Assistant March 2021 Present AI-Cybersecurity Lab at Hanyang University

#### **AWARDS**

- Data Science for Social Good @ University of Warwick Fellowship
- Three Minute Thesis (3MT®) Competition @ Hanyang ERICA 2nd Prize
- DAAD Travel Grant To attend Data Science Summer School@SRH Hochschule Heidelberg, Germany
- 2022 ERICA English Essay Contest Excellence Prize
- 2021 ERICA English Essay Contest Distinction Prize
- 2021 BK21 FOUR Scholarship Brain Korea 21 Program for Leading Universities & Students

## VOLUNTEERING

• Member&Freshman Mentor March 2019 - Jan 2021 Dankook University International Student Association

## **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)