LU ZHANG

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EDUCATION

- **Georgia State University, USA** Aug 2024 - Present
  PhD student in Computer Science
- **Hanyang University, South Korea** 2023
  Master's Degree in Applied AI
  Thesis: Detection and Measurement of Illicit Promotional Content on Chinese TikTok
- **Dankook University, South Korea** 2021
  Bachelor's Degree in Software Science
  Thesis: A Deep Learning-Based Method for Enhancing Instagram Influencer Advertising

RESEARCH INTERESTS

AI for Online Safety, Computational Social Science, Social Media Analysis

PROFESSIONAL EXPERIENCE

- **Graduate Teaching Assistant** Aug 2024 - Present
  Dept. of Computer Science at Georgia State University, USA
- **AI Specialist** Jan 2024 - Aug 2024
  Research Team 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
- **Graduate Research Assistant** Feb 2021 - Aug 2023
  AI·Cybersecurity Lab at Hanyang University, South Korea

AWARDS

Fellowship	Data Science for Social Good @ University of Warwick	2023
Travel Grant	DAAD (German Academic Exchange Service) Data Science Summer School @ Heidelberg	2022
Fellowship	Brain Korea 21 (BK21) program for Leading Universities and Students	2021

PUBLICATIONS

- **Lu Zhang**, Sungbin Park, Zuobin Xiong, Junggab Son, and Yeonjoon Lee. "Understanding Illicit Promotional Contents on Short Video Platforms", - To appear in *Tsinghua Science and Technology, 2025 (SCIE Q1, Impact Factor: 5.2)*
- **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)*

PROJECTS

- **Analyzing Patterns in Pro-China and Anti-China Propagation on Social Media** Aug 2024 - Present
  - Using multimodal models to analyze Sinophobia-related online content

- Conducting a systematic analysis of interaction and propagation patterns in pro- and anti-China social media posts and users, revealing structural dynamics that inform strategies for managing polarized discourse online

- **AI-Supported Smart Aquaculture System** Dec 2023 - Aug 2024
  - Constructed a Siamese Neural Network-based pipeline to identify flounder individuals in fishing farms using CCTV cameras, achieving a 95% F1-score
  - Visualized the geographic and weather data. Developed a machine learning-based system for salinity percentage prediction of ocean fish farms with sensors' data, geographic data, and weather data.
  - Developed an ensemble learning-based time series data forecasting pipeline to forecast fish weight growth with weather data and fish farm historical records
  - Developed an optimal fish feed quantity calculation system
- **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 = 90.7%), 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

SERVICES&VOLUNTEERING

- **Teaching Assistant**
  CSC 1302 - Principles of Computer Science II Spring 2025
  CSC 4780 - Fundamentals of Data Science Fall 2024
- **Reviewer**
  The International AAAI Conference on Web and Social Media (ICWSM) '25 2024
- **Member&Freshman Mentor** March 2019 - Jan 2021
  Dankook University International Student Association

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, NetworkX, PyG...
Automations	Crawler, Pyspider, Scrapy, Selenium, Pytest, PyAutoGUI
Domain Knowledge	Greenwashing, Social Media, Darknet, Deep Web, Cybercrime
Natural Languages	Chinese (Native), English (C1), Korean (B2)