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, Usable Security, Computational Social Science, Social Media Analysis

APPOINTMENTS

- **Graduate Teaching Assistant**, Georgia State University, USA Aug 2024 - Present
- **AI Specialist**, Research Institute at Globit Co., Ltd, South Korea Jan 2024 - Aug 2024
- **Data Science for Social Good Fellow**, the University of Warwick, UK Jun 2023 - Aug 2023
- **Graduate Research Assistant**, Hanyang University, South Korea Feb 2021 - Aug 2023

PUBLICATIONS

- Haoyan Wu, **Lu Zhang**. "Constrained Learnable Channel-wise Normalization for Single-Source Domain Generalization in Medical Image Segmentation", -*International Conference on Artificial Neural Networks, 2025*
- **Lu Zhang**, Sungbin Park, Zuobin Xiong, Junggab Son, and Yeonjoon Lee. "Understanding Illicit Promotional Contents on Short Video Platforms", -*Tsinghua Science and Technology, 2025 (SCIE Q2, Impact Factor: 3.5)*

AWARDS

Travel Grant BMW-EURECOM-TUM Summer School on Trust and Safety in AI@Saint-Raphaël, France 2025
Fellowship Data Science for Social Good@University of Warwick, UK 2023
Travel Grant DAAD (German Academic Exchange Service) Data Science Summer School@Heidelberg, Germany 2022
Scholarship Korean Government Brain Korea 21 (BK21) Scholarship@Hanyang University, South Korea 2021

PROJECTS

- **Understand Video-Cloaked Online Harmful Content** Jan 2025 - Present
  - Crawl and analyze video-carried harmful richly-formatted content with several qualitative methods and multimodal models
- **Analyze Patterns in Sinophobic and Sinophilic Propagation on Social Media** Aug 2024 - Present
  - Using multimodal models to analyze Sinophobia- and Sinophilia-related online content
  - Conducting a systematic analysis of interaction and propagation patterns in Sinophobic and Sinophilic 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. Enhanced model interpretability by visualizing fish features via heatmap
  - Visualized geographic and weather data and developed a machine learning-based system to predict salinity percentages in ocean fish farms using sensor, geographic, 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 5 mainstream social media platforms
  - Calculated the potential of firms engaging in Greenwashing
- **Detect&Measure Illicit Promotion on Chinese Short Video Platforms** [Slides] Apr 2022 - May 2023
  - Crawled more than 100 thousand 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
  - Scoped tasks with clinicians (Korea University Ansan Hospital); segmented eardrum boundaries with U-Net and classified three disease categories with EfficientNet.

TEACHING

- CSC 1302 - Principles of Computer Science II — Spring, Fall 2025
- CSC 3210 - Computer Organization and Programming — Summer 2025
- CSC 4780 - Fundamentals of Data Science — Fall 2024

SERVICES&VOLUNTEERING

- **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, R, 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, LangChain ...
Automations	Crawler, Pyspider, Scrapy, Selenium, Pytest, PyAutoGUI
Domain Knowledge	Social Media, Darknet, Deep Web, Cybercrime, Greenwashing, Ocean Fishery
Natural Languages	Chinese (Native), English (C1), Korean (B2)

Updated: *Saturday*16$^{\text{th}}$ *August*, 2025