Taehyun (Tae) Yang

Prospective Ph.D. Student, Department of Computer Science, University of Maryland
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Most of the names and institutions are linked to their relevant web pages for quick reference.

Education

2025 - **Ph.D. in Computer Science** — University of Maryland
Incoming student advised by Dr. Fumeng Yang

2021 - 2025 **B.S. in Computer Science and Engineering** — Seoul National University
B.S. in Business Administration
Advised by Dr. Sangmin Lee

2017 - 2018 **B.S. in Electrical Engineering** — University of Illinois at Urbana-Champaign
Withdrawn

Research Interests

My research lies at the intersection of Human-Computer Interaction and Social Computing. Through my research, I aim to understand how foundational models shape decision-making, communication, and trust, and how they can be designed to better serve the public. To this end, I develop AI systems that improve human-AI interactions by making model-driven decisions more transparent, adaptive, and socially responsible.

Publications

Peer-Reviewed Full Papers & Workshops

2024 P3 **Unveiling High-dimensional Backstage: A Survey for Reliable Visual Analytics with Dimensionality Reduction**
Hyeon Jeon, Hyunwook Lee, Yun-Hsin Kuo, **Taehyun Yang**, Daniel Archambault, Sungahn Ko, Takanori Fujiwara, Kwan-Liu Ma, and Jinwook Seo
ACM Conference on Human Factors in Computing Systems

2024 W1 **Using LLMs to Investigate Correlations of Conversational Follow-up Queries with User Satisfaction**
Hyunwoo Kim, Yoonseo Choi, **Taehyun Yang**, Honggu Lee, Chaneon Park, Yongju Lee, Jinyoung Kim, and Juho Kim
Workshop on Large Language Models (LLMs) for Evaluation in Information Retrieval, ACM SIGIR Conference on Research and Development in Information Retrieval

2024 P2 **Offsetting Perceptual Bias in Visual Clustering: The Role of Point Size Adjustment in Variable Display Sizes**
Taehyun Yang, Hyeon Jeon, and Jinwook Seo
IEEE Pacific Visualization Conference (Work in Progress)

2024 P1 **UMATO: Two-phase Manifold Approximation for Accurate, Scalable, and Stable Dimensionality Reduction**
Hyeon Jeon, Hyung-Kwon Ko, Soohyun Lee, Jake Hyun, **Taehyun Yang**, Gyehun Go, Jaemin Jo, and Jinwook Seo
IEEE Transactions on Visualization and Computer Graphics (Under minor revision)

Experiences

Research Experiences

2023 - 2025 **Undergraduate Intern**, SNU HCIL, Seoul National University
Advisor: Dr. Jinwook Seo
Developed ML visualization algorithms and visual perception models [P1, P2, P4]

2024 **Undergraduate Intern**, KIXLAB, KAIST
Advisor: Dr. Juho Kim
Investigated user behavior in multi-turn conversational search engines, collaborating with NAVER's Cue [W1]

2023 **Visiting Researcher**, Tech4Good Lab, University of California, Santa Cruz
Advisor: Dr. David Lee
Explored scaffolding and sub-goal learning techniques for programming education

Industry Experiences

2024 **Project Intern**, SoftlyAI
Led a team to develop a LLM system tailored for industry experts and healthcare professionals.

2023 - 2024 **Product Research & Development Intern**, Samsung Research
Developed hand-tracking interactions for Samsung's Vision AR prototypes.

2021 - 2023 **Co-Founder**, Team Chattie
Led a startup team to develop a Korean/English language learning platform (300 users).

2020 - 2021 **Research Consultant**, Korea Insight Institute
Consulted on market research projects, specializing in Fintech industries.

2019 - 2020 **Military Service**, Ministry of Gender Equality and Family
Developed applications focused on enhancing women's safety.

2019 **Intern Consultant**, Tech Suda
Served as a trilingual consultant (Chinese, Korean, English) at CES 2019

Teaching Experiences

2024 **Mentor**, LG AI Youth Camp
2024 **Undergraduate Teaching Assistant**, M1522 Computer Programming 🏆 Best TA Award
2024 **Undergraduate Teaching Assistant**, 4190.407 Algorithm
2023 **Undergraduate Teaching Assistant**, 035.001 Digital Computer Concept and Practice
2023 **Hackathon Judge**, International Collegiate Programming Contest (ICPC) Regional
2022 **Coding/Physics Tutor**, Ranked 5.4k/550k (1%) Top STEM teacher from Kim Study

Invited Talks

2024 **Enhancing Conversational Search Through Real World User Interaction Analysis at Scale**
Liberal Arts and Sciences Academic Festival, Feb. 2024

2023 **Exploring Visual Perception and Cluster Granularity**
K-VIS, Korean Institute of Information Scientists and Engineers, Dec. 2023

Grants and Scholarships

Research Grants

2024 **Learning Sciences Research Grant**, Learning Sciences Institute
Topic: Creating Easily Digestible Educational Group Chats with LLM-Driven Question and Answer Connections
Granted 2,000,000 KRW (≃ 1,500 USD)

2024 **Student Individual Research Program**, Faculty of Liberal Education
Topic: Can LLM Models Simulate Human Subjectivity?
Granted 5,000,000 KRW (≃ 3,700 USD)

2023 **SNU Undergraduate Research Program**, Computer Science and Engineering
Topic: Exploring Size in Visual Clustering Perception
Granted 1,000,000 KRW (≃ 750 USD)

Scholarships and Awards

2025 **Dean's Fellowship**, University of Maryland
Granted 5,000 USD for graduate studies

2024 **LG AI Mentorship Scholarship**, Seoul National University & LG Discovery Lab
Granted 2,000,000 KRW (≃ 1,500 USD)

2024 **SNU Semiconductor Excellence Scholarship**, Institute for Semiconductor Specialization
Awarded to 91/455 students (20%) for academic and extracurricular excellence
Granted 11,300,000 KRW (≃ 8,300 USD)

2023 **SNU-SEC Research Program Fellowship**, Samsung Research (Declined)
Recognized for research excellence
Granted 30,000,000 KRW (≃ 22,000 USD)

2022 **Visiting Researcher Travel Grant**, SNU Office of International Affairs
Awarded to 30/150 students (20%) for visiting research support
Granted 5,000,000 KRW (≃ 3,700 USD)

2022 **Golden award in K-Startup Competition**, Ministry of Culture, Sports and Tourism
Awarded to top 1/50 team (2%) for entrepreneurial excellence
Granted 10,000,000 KRW (≃ 7,500 USD)