# Yao-An Yang

+1 734-596-7786 | ayayang@umich.edu | yourwebsite.com

## Education

- **University of Michigan** — **Michigan, USA**
  *Bachelor of Science in Computer Science and Physics* — *September 2022 – May 2026 (Expected)*
  - Cumulative GPA: 3.97/4.0 (CS major: 3.97; Physics major: 3.97)
  - Selected Coursework: Linear Algebra, Continuous Optimization Methods, Operating Systems, Data Mining, Natural Language Processing, Machine Learning, Computer Vision, Introduction to AI (in progress)
- **Taipei Municipal JianGuo High School** — **Taipei Taiwan**
  *High School Diploma* — *September 2019 – June 2022*
  - Unweighted GPA: 3.99/4.0; Graduated top 4% of the class
  - Ranked top 0.4% (<250) in National College Entrance Exam
  - Placed top 1% in National High School Entrance Exam

## Publications

- Donald Loveland, **Yao-An Yang**, Danai Koutra. 2025. Glance for Context: Learning When to Leverage LLMs for Node-Aware GNN-LLM Fusion. Under Review at the International Conference on Learning Representations (ICLR), 2026.
- Jiong Zhu*, Gaotang Li*, **Yao-An Yang**, Jing Zhu, Xuehao Cui, Danai Koutra. 2024. On the impact of feature heterophily on link prediction with graph neural networks. Advances in Neural Information Processing Systems (NeurIPS), 2024. (*equal contributions)

## Lab Affiliation

- **Situated Language and Embodied Dialogue (SLED) lab** — **Michigan, USA**
  *Student Researcher* — *May 2024 – Present*
  - Advisor: Prof. Joyce Chai
  - Collaborators: Ziqiao Ma, Prof. Jonathan Brennan, Prof. Freda Shi
  - Research topics: Vision Language Model steering and grounding, LLM pattern learning and habituation
- **Graph Exploration and Mining at Scale (GEMS) lab** — **Michigan, USA**
  *Student Researcher* — *March 2023 – Present*
  - Advisor: Prof. Danai Koutra
  - Collaborators: Donald Loveland, Gaotang Li, Dr. Jiong Zhu
  - Research topics: Graph Neural Networks, Graph Learning and link prediction under Heterophily, Text Attributed Graph Learning through GNN and LLM fusion
- **Lorenzon Lab (Michigan Xenon Group)** — **Michigan, USA**
  *Student Researcher* — *Oct 2023 - Nov 2024*
  - Advisor: Prof. Wolfgang Lorenzon
  - Collaborators: Dr. Gregory Rischbieter
  - Research topics: Hardware development for cryogenic Xenon particle detector, data analytics with Python, data acquisition with C++

## Research Projects

- **Vision Language Model (VLM) Grounding through Steering** — **Michigan, USA**
  *Project Lead* — *June 2025 - Present*
  - Designed algorithm to improve VLM grounding and attention to detail through lightweight steering head
  - Developed code for dataloading, VLM model and steering head, VLM training and finetuning, and evaluation
  - In collaboration with Ziqiao Ma and Prof. Joyce Chai

- **Probing Large LLM Working Memory through Patterned Stimuli** — **Michigan, USA**
  *Co-Project Lead* — *January 2025 - Present*
  - Comparing language models and humans working memory on patterned stimuli
  - Developed code evaluating large language model on repeated and patterned textual input
  - Designed pipeline to test human subject reaction time on repeated and patterned text
  - In collaboration with Ziqiao Ma, Junyuan Zhao, Prof. Jonathan Brennan, Prof. Freda Shi and Prof. Joyce Chai
- **Designing Effective GNN-LLM fusion** — **Michigan, USA**
  *Co-Author* — *June 2025 - Sep 2025*
  - Benchmarking and improving efficiency and effectiveness of graph learning pipelines that use LLM
  - Implemented models for comparison on datasets ranging from 5K to 6M edges
  - Created pipelines to finetune language models for embedding text for graph learning tasks
  - Work under review at the International Conference on Learning Representations 2026
- **Evaluating Effective Designs for Heterophillic Link Prediction with GNN** — **Michigan, USA**
  *Co-Author* — *Mar 2023 - May 2024*
  - Implemented dataloading pipelines and GNN models such as GCN, SAGE and BUDDY
  - Ran ablation studies, benchmarked models, and analyzed experiment results presented in the paper
  - Work published in the Advances in Neural Information Processing Systems 2024

## Work Experience

- **Viainno Corporation** — **Taipei, Taiwan**
  *Software Developer* — *Jul 2023 - Jul 2024*
  - Worked in-person full-time over summer and remote part-time during the school year
  - Developed mobile app features for large apartment buildings management using Flutter
  - Tested web apps written in Vue.js and mobile apps written in Flutter
  - Redesigned company website using Tailwind CSS and Vue.js for product marketing

## Extracurriculars

- **Michigan Hackathon (MHacks)** — **Michigan, USA**
  *First Place Winner* — *Nov 2023*
  - Developed Flutter mobile app for users to sign in with Google OAuth and upload videos to Firebase database
  - Generated 3D models of the uploaded videos using Neural Radiance Fields (NeRF)
  - Created a 3D environment for users to scale and move generated 3D models for interior design
- **Michigan Robotic Submarine Team** — **Michigan, USA**
  *Software Team Engineer* — *Sep 2022 - Oct 2023*
  - Implemented and tested state estimation using Extended Kalman Filters
  - Worked on real-time underwater object detection using OpenCV and YOLO
  - Designed state machine diagrams for task planning and motor control testing
- **Michigan Autonomous Aerial Vehicle Team** — **Michigan, USA**
  *Embedded System Team Engineer* — *Sep 2022 - Jul 2023*
  - Designed and assembled printed circuit boards using Autodesk Eagle
  - Developed safety features and emergency stop for autonomous drone
  - Implemented embedded code for STM32 microcontroller

## Awards and Honors

- **University Honors (All 6 semesters)**, *University of Michigan* — **Dec 2022 - May 2025**
- **James B. Angell Scholar (2 time recipient)**, *University of Michigan* — **March 2024 & March 2025**
- **NeurIPS Scholar Award**, *Conference on Neural Information Processing Systems* — **Dec 2024**
- **William J. Branstrom Freshman Prize (top 5% freshman)**, *University of Michigan* — **March 2023**
- **The Advanced Program of Physics**, *National Taiwan University* — **Oct 2020 - Jul 2021**
- **Taiwan Young-Student Physicists' Tournament, Gold Medal (2 time recipient)**
  *National Taiwan Normal University* — **July 2020 & March 2021**