

Simon Yu

Urbana, IL | simonyu@simonyu.net | (217)-979-6645 | simonyu.net | linkedin.com/in/thesimonyu

Education

Doctor of Philosophy in Electrical and Computer Engineering May 2026

- University of Illinois Urbana-Champaign, GPA: 3.97 / 4.00
- Advisor: Professor Lui Raymond Sha

Master of Science in Electrical and Computer Engineering May 2025

- University of Illinois Urbana-Champaign, GPA: 3.97 / 4.00
- Advisor: Professor Lui Raymond Sha

Bachelor of Science with Honors in Computer Engineering May 2019

- University of Illinois Urbana-Champaign, GPA: 3.72 / 4.00
- Advisor: Professor Dr. Marco Caccamo
- Minor: Computational Science and Engineering

Skills

Programming Languages: C/C++, Python, Bash, LaTeX, Java, MATLAB, JavaScript, HTML, CSS

Development Frameworks: Git, CMake, Qt, FreeRTOS, PyTorch, KiCad, FreeCAD, Apollo/CyberRT, ROS

Hardware Platforms: ESP32, Arduino, Raspberry Pi, NVIDIA Jetson TX1/TX2/Xavier/Orin

Experiences

System Software Engineer, NVIDIA Sep 2026 - Present

- Developed GPU system software firmware components, optimizing power management and system performance
- Resolved complex technical issues independently across multiple hardware and software teams and domains
- Contributed to architecture and design specifications to influence future GPU architecture and system software
- Collaborated with teams around the globe on the design, development, and launch of new products and features

Graduate Teaching Assistant, ECE 110 Introduction to Electronics Jan 2026 - May 2026

- Conducted weekly electronics lab sessions, supervising equipment, experiments, and team-based activities
- Delivered lab instructions, guided hands-on activities, and assisted in debugging problematic student circuits
- Answered student questions on lab assignments and homework, clarifying theory and practical applications
- Graded lab reports and final projects, providing feedback to students on proposal, implementation, and results

Graduate Teaching Assistant, CS 431 Embedded Systems Jan 2024 - May 2024

- Rewrote and modernized lab curriculum with Biped platform, authoring instructions and 9 new lab assignments
- Designed progressive lab modules from low-level hardware drivers to high-level controllers and planners
- Updated lecture slides, created new homework and exams, and supervised grading by undergraduate assistants
- Taught lab sessions by giving instructions, answering questions, assisting with debugging, and grading demos

Co-Founder, Multiped LLC May 2023 - Present

- Founded startup to commercialize and extend existing Biped design into general, modular embedded platform
- Developed next-gen prototype with advanced sensor and power systems with 3D-printed chassis in FreeCAD
- Showcased new prototype controlling Quanser helicopter chassis live in 2025 NASA ULI on-site demo event
- Authored documentation and conference publications detailing system design and experimental results [2, 3]

Graduate Research Assistant, Cyber-Physical Systems Integration Lab (CPSIL) Aug 2019 - May 2026

- Conducted research on safe autonomous systems, focusing on embedded platforms and robust perception
- Designed hardware-software prototypes, performed large-scale experiments in simulated and real-world settings

- Developed, documented, and released open-source codebases for published research prototypes and experiments
- Contributed to talks and grant proposals, authored and reviewed conference and journal publications [1 – 17]

Undergraduate Research Assistant, Cyber-Physical Systems Integration Lab (CPSIL) May 2017 - Aug 2017

- Supported uavAP autopilot development in C/C++, implementing trajectory models and maneuver automation
- Developed Qt ground station widgets and flight analysis modules for automated logging and system analysis
- Conducted experiment validations via high-fidelity simulated flights in X-Plane and real-world flight tests
- Co-authored technical reports and conference papers, resulting in multiple peer-reviewed publications [18 – 20]

Site Manager, University Residential Technology Services Aug 2016 - May 2017

- Provided on-site technical support and troubleshooting for residents in university residence halls
- Maintained daily operations of residential computer labs, ensuring availability and reliability of resources
- Monitored and serviced printers, computers, and other equipment in computer labs to minimize downtime
- Supervised and coordinated with student staff on lab maintenance and basic technical support tasks

Undergraduate Teaching Assistant, ECE 110 Introduction to Electronics Aug 2016 - Dec 2016

- Assisted graduate teaching assistants in running lab sessions and ensuring smooth execution of experiments
- Delivered lab instructions, guided hands-on activities, and assisted in debugging problematic student circuits
- Answered student questions on lab assignments and homework, clarifying theory and practical applications
- Supported grading of lab reports and provided feedback to help students improve their lab tasks and projects

Undergraduate Teaching Assistant, CS 101 Introduction to Computing Jan 2016 - May 2016

- Assisted graduate teaching assistants in managing weekly lab sessions and supporting instruction
- Guided students through programming assignments in Python, reinforcing lab objectives and goals
- Addressed student questions on coding, debugging, and homework during labs and office hours
- Supported grading of assignments and provided constructive feedback to improve coding practices

Research Interests

- **Cyber-Physical and Embedded Systems:** Robust and safe hardware-software platform for safety-critical tasks
- **Interpretable Machine Learning:** Neuro-symbolic model integrating deep learning with probabilistic circuits
- **Autonomous Driving:** Verifiable perception with LiDAR clustering enabling safety, redundancy, and efficiency
- **Unmanned Aerial Vehicles (UAVs):** Autopilot, maneuver automation, and geofencing with realistic constraints

Research Projects

NASA University Leadership Initiative (ULI): Robust Platform for Urban Air Mobility May 2024 - May 2026

- Redesigned Biped platform to support both two-wheel ground chassis and Quanser helicopter aerial chassis
- Integrated high-performance layer with Neural Probabilistic Circuit for interpretable learning and reasoning
- Implemented high-assurance layer with geofencing mechanisms for mission safety and operational assurance
- Demonstrated Biped prototype controlling Quanser at NASA ULI on-site review, with results published [2, 3]

Neural Probabilistic Circuit (NPC) for Robust and Interpretable Perception Nov 2022 - Aug 2026

- Developed end-to-end pipeline in PyTorch with attribute recognition, probabilistic circuit (PC), and joint training
- Built custom PC codebase in PyTorch with LearnSPN Java integration for GPU inference and parameter learning
- Created PyQt dataset labeling tool for attribute annotation and visualization tool for model interpretability
- Trained and tested 200+ models across multiple datasets and ablation studies, with results published [1, 3, 5, 6]

Biped Embedded Hardware-Software Platform for Robotics and Autonomy Dec 2021 - Jun 2026

- Co-designed in KiCad and assembled self-balancing robotic hardware with ESP32, sensor suite, and custom PCB
- Developed real-time firmware in C++/FreeRTOS with drivers, sensing/actuation, controllers, and planners
- Created Qt desktop ground station software for telemetry, controller tuning, commands, and camera streaming
- Assembled and deployed 15+ Bipeds in CS 431, supporting 40+ students in labs, with results published [2, 3]

LiDAR Clustering for Robust and Verifiable Perception

Aug 2019 - May 2024

- Developed modular C/C++ API extending Depth Clustering for modern datasets (Waymo) and Apollo/CyberRT
- Created Qt visualizer with parameter and camera frame/projection widgets for experiments and dataset analysis
- Supported hardware deployment on ARM/Jetson platforms via cross-compilation for real-time experiments
- Contributed to multiple publications on safe and redundant perception with framework as backbone [8 – 14]

Unmanned Aerial Vehicle (UAV) Geofencing Trajectory Estimation

Jun 2018 - Jan 2020

- Derived analytical trajectory model for estimating geofencing trajectories under realistic constraints
- Developed geofencing algorithms for enforcing predefined geofence and performing evasive maneuvers
- Implemented framework in uavAP autopilot in C/C++ and validated through X-Plane and real-world flights
- Published results showing superior estimation and geofencing performance over existing models [3, 7, 16, 20]

Unmanned Aerial Vehicle (UAV) Flight Maneuver Automation

Jun 2018 - Jun 2019

- Designed and implemented in C/C++ maneuver planner for control overrides and flight maneuver automation
- Built flight analysis modules for automated maneuver logging, PID metrics analysis, and aircraft trim analysis
- Developed Qt user interface components for configuring, monitoring, and analyzing automated flight maneuvers
- Published results validating framework in X-Plane flight simulator and real-world flight tests [15, 18, 19]

Unmanned Aerial Vehicle (UAV) Autopilot and Emulation Environment

Jun 2017 - Jun 2020

- Designed, implemented, and tuned cascaded PID controllers within uavAP autopilot framework in C/C++
- Developed maneuver planner and flight analysis autopilot modules for flight automation and data collection
- Built Qt ground station widgets in uavEE emulation environment with ROS for mission control and analysis
- Co-authored peer-reviewed publication presenting formalized design and evaluation of uavAP framework [15]

Autonomous Helicopter Autopilot

Oct 2016 - Dec 2017

- Designed servomotor mapping and channel mixing interface for actuating helicopter swashplate
- Implemented and tuned cascaded PID controllers for controlling aircraft position, velocity, and attitude
- Integrated existing path-planning and path-following frameworks for trajectory and 3D waypoint tracking
- Developed in C/C++ and integrated with high-fidelity flight simulator via serial communication

Personal Projects

Termlink: Fallout Terminal and Tandy Radio Shack TRS-80 Microcomputers

Jul 2024 - Oct 2024

- Recreated Fallout in-game terminal in C/C++/ncurses, reproducing password-hacking gameplay and mechanics
- Extended program into general file explorer with text viewer, hex dump, and in-game entries from JSON files
- Built audio engine for game sounds and serial interface for streaming program UI to physical TRS-80 computer
- Debugged TRS-80 hard drive controller fault in error amplifier and compiled C programs on restored system

Chameleon: Versatile Website Framework and Gallery Manager

Aug 2023 - Nov 2024

- Created modular HTML/CSS/JavaScript framework hosting 3+ sites with configurable and reusable components
- Implemented core components including galleries, picture viewer, and page viewer for content embedding
- Integrated services including LLMs, x86 and Python emulations, Git server, and remote management consoles
- Developed cross-platform gallery manager in Qt for large-scale edits with HTTP/SSH-based synchronization

config-utils: Cross-Platform Configuration Synchronization Utility

Aug 2022 - Oct 2024

- Implemented entirely in Bash for managing and syncing system configuration files across UNIX-based systems
- Supported targeted configuration files configurable based on OS/host/user using Git and rsync as backends
- Developed subcommands for status checks, push/pull, upgrade, and direct CLI editing of meta configuration
- Reduced setup time for new machines from hours to minutes, ensuring consistent system environments at scale

Publications

-
- [1] **Neural Probabilistic Circuits: Enabling Compositional and Interpretable Predictions through Logical Reasoning** Aug 2026
*Simon Yu**, Weixin Chen*, Huajie Shao, Lui Sha, Han Zhao
Springer Nature Machine Learning Journal (MLJ)
doi.org/10.1007/s10994-026-07118-7
**Co-first authors with equal contributions*
- [2] **Biped: A Unified Embedded Hardware-Software Platform for Urban Air Mobility and Autonomous Applications** Jun 2026
Simon Yu, Steven Zhu, Lui Sha, Or D. Dantsker
AIAA Aviation Forum
doi.org/10.2514/6.2026-4493
- [3] **Safe and Robust Autonomy in Cyber-Physical Systems** May 2026
Simon Yu
Doctoral Dissertation, Illinois Digital Environment for Access to Learning and Scholarship (IDEALS)*
**Approved for deposit*
- [4] **Weakly-Supervised Disentangled Representation Learning via Filter-Based Adaptive Swapping** Jan 2026
Zhenyu Zong, Qidi Wang, *Simon Yu*, Hongpeng Cao, Yanbing Mao, Han Zhao, Lui Sha, Huajie Shao
Transactions on Machine Learning Research (TMLR)
openreview.net/forum?id=K69rKKozZU
- [5] **VISAT: Benchmarking Adversarial and Distribution Shift Robustness in Traffic Sign Recognition with Visual Attributes** Oct 2025
Simon Yu, Peilin Yu, Hongbo Zheng, Huajie Shao, Han Zhao, Lui Sha
arXiv Preprint
doi.org/10.48550/arXiv.2510.26833
- [6] **Neural Probabilistic Circuits: An Overview** Jun 2025
*Simon Yu**, Weixin Chen*, Huajie Shao, Lui Sha, Han Zhao
Workshop on Tractable Probabilistic Modeling (TPM), Conference on Uncertainty in Artificial Intelligence (UAI)
openreview.net/forum?id=cBoYAtNwrg
**Co-first authors with equal contributions*
- [7] **Geofencing Trajectory Estimation for Small-Scale Fixed-Wing UAVs** May 2025
Simon Yu
Master's Thesis, Illinois Digital Environment for Access to Learning and Scholarship (IDEALS)
hdl.handle.net/2142/129339
- [8] **Perception Simplex: Verifiable Collision Avoidance in Autonomous Vehicles Amidst Obstacle Detection Faults** May 2024
Ayoosh Bansal, Hunmin Kim, *Simon Yu*, Bo Li, Naira Hovakimyan, Marco Caccamo, Lui Sha
Journal of Software Testing, Verification and Reliability (STVR)
doi.org/10.1002/stvr.1879
- [9] **Taming Algorithmic Priority Inversion in Mission-Critical Perception Pipelines** Jan 2024
Shengzhong Liu, Shuochao Yao, Xinzhe Fu, Rohan Tabish, *Simon Yu*, Ayoosh Bansal, Heechul Yun, Lui Sha, Tarek Abdelzaher
Communications of the ACM
doi.org/10.1145/3610801

- [10] **Verifiable Obstacle Detection** Dec 2022
Ayoosh Bansal, Hunmin Kim, **Simon Yu**, Bo Li, Naira Hovakimyan, Marco Caccamo, Lui Sha
IEEE International Symposium on Software Reliability Engineering (ISSRE)
doi.org/10.1109/ISSRE55969.2022.00017
- [11] **Synergistic Redundancy: Towards Verifiable Safety for Autonomous Vehicles** Sep 2022
Ayoosh Bansal, **Simon Yu**, Hunmin Kim, Bo Li, Naira Hovakimyan, Marco Caccamo, Lui Sha
arXiv Preprint
arxiv.org/abs/2209.01710v1
- [12] **LiDAR Cluster First and Camera Inference Later: A New Perspective Towards Autonomous Driving** Nov 2021
Jiyang Chen, **Simon Yu**, Rohan Tabish, Ayoosh Bansal, Shengzhong Liu, Tarek Abdelzaher, Lui Sha
arXiv Preprint
doi.org/10.48550/arXiv.2111.09799
- [13] **Real-Time Task Scheduling for Machine Perception in Intelligent Cyber-Physical Systems** Aug 2021
Shengzhong Liu, Shuochao Yao, Xinzhe Fu, Huajie Shao, Rohan Tabish, **Simon Yu**, Ayoosh Bansal, Heechul Yun, Lui Sha, Tarek Abdelzaher
IEEE Transactions on Computers
doi.org/10.1109/TC.2021.3106496
- [14] **On Removing Algorithmic Priority Inversion from Mission-Critical Machine Inference Pipelines*** Feb 2021
Shengzhong Liu, Shuochao Yao, Xinzhe Fu, Rohan Tabish, **Simon Yu**, Ayoosh Bansal, Heechul Yun, Lui Sha, Tarek Abdelzaher
IEEE Real-Time Systems Symposium (RTSS)
doi.org/10.1109/RTSS49844.2020.00037
**Recipient of the Outstanding Paper Awards by the RTSS 2020 Program Committee*
- [15] **uavAP: A Modular Autopilot Framework for UAVs** Jun 2020
Mirco Theile, Or D. Dantsker, Richard Nai, Marco Caccamo, **Simon Yu**
AIAA Aviation Forum
doi.org/10.2514/6.2020-3268
- [16] **Trajectory Estimation for Geo-Fencing Applications on Small-Size Fixed-Wing UAVs** Jan 2020
Simon Yu*, Mirco Theile*, Or D. Dantsker, Marco Caccamo
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
doi.org/10.1109/IROS40897.2019.8967579
**Co-first authors with equal contributions*
- [17] **Continued Development and Flight Testing of a Long-Endurance Solar-Powered Unmanned Aircraft: UIUC-TUM Solar Flyer** Jan 2020
Or D. Dantsker, Mirco Theile, Marco Caccamo, **Simon Yu**, Moiz Vahora, Renato Mancuso
AIAA Science and Technology (SciTech) Forum
doi.org/10.2514/6.2020-0781
- [18] **Flight Maneuver Automation for System Analysis of Small Fixed-Wing UAVs** Jun 2019
Simon Yu
Undergraduate Senior Thesis, Illinois Digital Environment for Access to Learning and Scholarship (IDEALS)
hdl.handle.net/2142/104050
- [19] **Flight Testing Automation to Parameterize Unmanned Aircraft Dynamics** Jun 2019

Or D. Dantsker, *Simon Yu*, Moiz Vahora, Marco Caccamo
AIAA Aviation Forum
doi.org/10.2514/6.2019-3230

[20] Kinematic Model for Fixed-Wing Aircraft with Constrained Roll-Rate Sep 2018

Mirco Theile, *Simon Yu*

Illinois Digital Environment for Access to Learning and Scholarship (IDEALS)

hdl.handle.net/2142/101442

Presentations and Talks

Biped: A Unified Embedded Hardware-Software Platform for Urban Air Mobility and Autonomous Applications Jun 2026

Simon Yu, Steven Zhu, Lui Sha, Or D. Dantsker

AIAA Aviation Forum, San Diego, California, United States

Safe and Robust Autonomy in Cyber-Physical Systems Mar 2026

Simon Yu

Doctoral Defense, Urbana, Illinois, United States

Certiably Safe and Robust Perception for Urban Air Mobility May 2025

Ayoosh Bansal, Mikael Yeghiazaryan, *Simon Yu*, Jiawei Zhang

NASA ULI On-Site Demonstration, Reno, Nevada, United States

Robust, Interpretable, and Safe Machine Learning Perception with Neural Probabilistic Circuit Mar 2025

Simon Yu, Weixin Chen, Huajie Shao, Lui Sha, Han Zhao

UIUC-TUM Workshop on Cyber-Physical Systems, Urbana, Illinois, United States

Thrust 1 Demo Update: AVIATE Demo Plan Feb 2025

Lui Sha, Mikael Yeghiazaryan, *Simon Yu*, Ayoosh Bansal

NASA ULI AVIATE Seminar, Urbana, Illinois, United States

Certiably Safe and Robust Perception for Learning-Enabled Autonomy Oct 2024

Ayoosh Bansal, *Simon Yu*, Lui Sha

NASA ULI Annual Review 2024, Urbana, Illinois, United States

Certiably Safe and Robust Perception for Learning-Enabled Autonomy Nov 2023

Ayoosh Bansal, *Simon Yu*, Lui Sha

NASA ULI Annual Review 2023, Urbana, Illinois, United States

VISAT: Using Visual Attributes to Benchmark Image Recognition Robustness under Adversarial Attack and Distribution Shift Jun 2023

Simon Yu, Peilin Yu, Hongbo Zheng, Huajie Shao, Han Zhao, Lui Sha

NASA ULI AVIATE Seminar, Urbana, Illinois, United States

Trajectory Estimation for Geo-Fencing Applications on Small-Size Fixed-Wing UAVs Oct 2019

Mirco Theile, *Simon Yu*, Or D. Dantsker, Marco Caccamo

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Cotai, Macao, China

uavEE: A Modular, Power-Aware Emulation Environment for Rapid Prototyping and Testing of UAVs Sep 2019

Mirco Theile, Or D. Dantsker, Richard Nai, Marco Caccamo, *Simon Yu*

Autonomous and Cyber-Physical Systems Seminar, Urbana, Illinois, United States

Flight Testing Automation to Parameterize Unmanned Aircraft Dynamics Sep 2019

Or D. Dantsker, *Simon Yu*, Moiz Vahora, Marco Caccamo

Autonomous and Cyber-Physical Systems Seminar, Urbana, Illinois, United States

Trajectory Estimation for Geo-Fencing Applications on Small-Size Fixed-Wing UAVs Sep 2019

Mirco Theile, *Simon Yu*, Or D. Dantsker, Marco Caccamo

Autonomous and Cyber-Physical Systems Seminar, Urbana, Illinois, United States

Flight Maneuver Automation for System Analysis of Small Fixed-Wing UAVs May 2019

Simon Yu

ECE Undergraduate Research Symposium, Urbana, Illinois, United States

Conference Reviews

Reviewer in 2024 Neural Information Processing Systems (NeurIPS) May 2024

- Nominated by NeurIPS 2024 Program Chair Committee
- Peer-reviewed 5 paper submissions in Datasets and Benchmarks Track with rebuttal discussions

Reviewer in 2019 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) Mar 2019

- Requested by IROS 2019 Associate Editor
- Peer-reviewed 1 paper submission in Aerial Robot Track

Honors and Awards

Full Member, Sigma Xi, The Scientific Research Honor Society Feb 2026

- Nominated by members in recognition of at least two primary-author articles published in refereed venues

Outstanding Paper Awards, IEEE Real-Time Systems Symposium (RTSS) Dec 2020

- Awarded to papers by the RTSS 2020 Program Committee for their high-quality research contributions [14]

Indira Gunda Saladi Engineering Research Scholarship Oct 2018

- Awarded yearly to one student involved in research projects with independent thinking

Member, Institute of Electrical and Electronics Engineers (IEEE) Sep 2018

- Affiliated as active member of the largest organization for advancements in electrical and computer engineering

Member, IEEE Eta Kappa Nu, Illinois Alpha Chapter Apr 2018

- Initiated students in the top third of their class by GPA who complete ten hours of community service

Member, Tau Beta Pi, Illinois Alpha Chapter Apr 2018

- Initiated students in the top fifth of their class by hours who complete social, professional, and service events

Dean's List of Academic Excellence, The Grainger College of Engineering Mar 2018

- Awarded to students with a top 20 percent GPA within their college

Bruce C. Mather Memorial Scholarship Sep 2017

- Awarded to students dedicated to completing rigorous work towards earning an engineering degree

Illinois Engineering Achievement Scholarship Apr 2017

- Awarded to students with a 3.0 GPA and above, and with great performance in school work

James Scholar, The Grainger College of Engineering Jan 2017

- Awarded to students with a 3.5 GPA and above, who participated in honor projects and activities

Student Mentoring

Alex Tanthiptham, Undergraduate Research Assistant Sep 2023 - May 2024

- Supervised Alex's contributions to Biped hardware, including part replacement and design of a new IMU module
- Managed Alex's involvement in ML research, including labeling, training, literature review, and paper revisions

Rahim Masood Khan, Undergraduate Research Assistant Aug 2023 - May 2024

- Supervised Rahim's work on ML research, including implementation and integration of probabilistic circuits

- Advised Rahim in evaluating joint neural probabilistic circuit models and reviewing counterfactual explanations

Tommy Tang, Undergraduate Research Assistant

Aug 2023 - May 2024

- Supervised Tommy's contributions to ML research, including labeling, model tuning, and probabilistic circuits
- Guided Tommy in creating experiments for testing model robustness and performance under adversarial attacks

Trusha Vernekar, Project Coordinator and Undergraduate Research Assistant

Jul 2023 - May 2024

- Supervised Trusha as project coordinator, assisting and reporting progress of 2+ undergraduate research groups
- Managed Trusha's contributions to Biped hardware, synthetic traffic-sign dataset, labeling, and model training

Lucas Zhou, Undergraduate Research Assistant and CS 431 Course Grader

Jul 2023 - May 2024

- Supervised Lucas' work on model training/testing and creating synthetic traffic-sign datasets in Unreal Engine
- Managed Lucas' role as CS 431 course grader in grading homework/exam and assisting with student inquiries

Steven Zhu, System Designer and CS 431 Graduate Teaching Assistant

Dec 2021 - May 2023

- Supervised Steven's involvement in developing Biped, including KiCad design, prototyping, and assembly
- Advised Steven's graduate teaching assistantship for CS 431 in deploying and teaching new Biped-based labs

Service and Leadership

Course Designer, CS 431 Embedded Systems

Jan 2022 - May 2026

- Designed and adopted Biped platform as new lab curriculum, replacing old ball-balancing and Arduino systems
- Supervised hardware assembly, testing, and ongoing maintenance of 15+ Bipeds used across multiple semesters
- Trained incoming graduate teaching assistants and coordinated with university IT to maintain lab workstations
- Ensured continuity and upkeep of lab infrastructure after transitioning out of active teaching assistant role

Lab Administrator, Cyber-Physical Systems Integration Lab (CPSIL)

Aug 2019 - May 2026

- Organized and maintained lab space, establishing clean, functional work areas for research groups
- Configured, upgraded, and managed lab machines and GPU clusters, including access control and scheduling
- Directed day-to-day operations to ensure reliable lab infrastructure for ongoing research projects and tasks
- Recruited, interviewed, and mentored undergraduate students, forming and managing multiple research teams