Bingying Wang

Mobile: (+1) 801-462-9415 Email: bchen2666@gmail.com Website: https://berylchen3.github.io/

Education

University of Utah *Aug. 2021 - May 2026(Expected)*

Degree: Bachelor | **Major:** Computer Science, **Minor**: Mathematics | **GPA:** 3.84/4.0

Scholarships & Honors:

Academic Excellence Scholarship *Apr. 2021 - May 2025*

Dean's List *May 2022, Dec 2022, Dec 2024, May 2025*

Selected Projects

Reinforcement Learning for Robotic Manipulation *LL4MA Lab, Kahlert School of Computing, UT*

Research Assistant *Supervised by Assoc. Prof. Tucker Hermans* *Feb. 2025 - Present*

- Designed and implemented a custom Gymnasium environment for the Franka Panda robotic arm in PyBullet to perform pick-and-place manipulation tasks.
- Trained a Soft Actor-Critic (SAC) policy to learn grasping and lifting behaviors with dense reward shaping and domain randomization for improved generalization.
- Developed evaluation and visualization scripts with Python to record training curves and success episodes as MP4/GIF outputs.
- Exploring hierarchical control by separating grasping and placement policies, coordinated through a higher-level switching policy.
- Planned transition to Isaac Lab for sim-to-real validation upon access to GPU-equipped hardware.

Center for High Performance Computing (CHPC) Security Project *Kahlert School of Computing, UT*

Research Assistant *Supervised by Assoc. Prof. Jun Xu* *May 2024 - Aug. 2024*

- Designed user surveys and conducted data analysis to inform the development of robust security measures, approved by the Institutional Review Board (IRB).
- Maintained and managed a unified GitHub repository to enhance the team's efficiency in data processing and experimental replication.
- Developed Python-based data analysis workflows to clean and extract user log data from the CHPC system and combine it with SQL for data filtering and statistical aggregation.

Educational App Development - Vector Golf *Kahlert School of Computing, UT*

Core developer *Supervised by Assoc. Prof. David Johnson* *Aug. 2024 – Dec. 2024*

- Implemented the logic for the Swing button with C++ and Qt, converting the user-input vector into the direction and speed of the golf ball's motion, and created the relevant classes to display the vector's magnitude and components.
- Implemented the golf ball's interaction with the environment using Box2D and designed dynamic feedback effects for when the ball enters the hole, such as the flag fluttering in the wind and particle effects.
- Added a transparent support structure to prevent the sphere from falling out of the window due to bugs, ensuring system stability.
- Optimized code and wrote documentation.

Study on the Popularity of Different Types of Channels on the German YouTube Platform *UT*

Independent project *Supervised by Asst. Prof. Fengjiao Wang* *Jan. 2025 - May 2025*

- Collected a dataset of the top 1000 most popular YouTube channels in Germany from Kaggle and conducted data preprocessing, including removing mislabeled entries, standardizing category tags, and converting subscriber counts and video counts from string formats to numerical data.
- Analyzed and visualized data with Python in Google Colab, adopting a linear regression model and one-way analysis of variance.
- Concluded that the importance of content quality and engagement strategies far outweighs content quantity.

Training Experience

Software Assistant Engineer, *Supervised by Xinchao Liu* from the Engineering Department, Tongji Architectural Design (Group) Co., Ltd. *May 2025 - Aug. 2025*

Participated in Shanghai's urban infrastructure project, the "Shanghai Digital Waterway Initiative," by implementing AI algorithms for real-time waterway monitoring.

- Developed back-end services in Java (Spring Boot) for a cloud-based urban planning platform to improve system scalability and performance.

- Designed and implemented RESTful APIs with Java based on Spring Boot to integrate real-time municipal infrastructure data, optimizing data processing and visualization.
- Assisted in debugging multi-source data integration modules, such as remote sensing monitoring and real-time sensors.
- Reduced response pressure during high concurrency through asynchronous processing and data pre-caching mechanisms.
- Assisted in refactoring existing synchronous communication modules into an event-driven architecture, significantly improving system throughput., reducing processing latency by 20%.

Practical Experience

Teaching Support Work of Kahlert School of Computing, the University of Utah *Aug. 2023 - May 2024*

Teaching Assistant *for Data Structures & Algorithms and Accelerated Object-Orient Programming Language*

- Guided around 230 students in mastering data structures and algorithms by providing practical examples and hands-on problem-solving sessions.
- Supported professors with assignment analysis and exam solution preparation to ensure accurate and consistent grading.
- Collaborated with faculty to address student learning challenges and improve overall academic performance.

Skills

Programming Languages: C(1 yr), C#(3 yrs), C++(1 yr), Java(4 yrs), JavaScript(1 yr), Python(4 yrs), R(2 yrs), Ruby, Racket
Technical Skills: Machine Learning (Python), Data Analytics (SQL, MATLAB), Fronted Development (HTML, CSS, JavaScript), AI Model Development, Physics Engines (Unity, QT)
Practical Operation Tools: Linux, Git, Docker, Visual Studio Code, WordPress, JetBrains Suite (IntelliJ IDEA, PyCharm)
Languages: English (Proficient), Mandarin (Native), Japanese (Intermediate)

Hobbies

Painting, Raising pets (Devon Rex Lover)