

RUNQIU YE

☎ 412-519-5386 ✉ runqiu@andrew.cmu.edu [in linkedin.com/in/runqiu-ye](https://www.linkedin.com/in/runqiu-ye) github.com/RunqiuYe

EDUCATION

Carnegie Mellon University

Expected Graduation 2027

Bachelor of Science in Computer Science and Mathematics

Pittsburgh, Pennsylvania

- **GPA:** 4.0/4.0
- **Computer Science Coursework:** Machine Learning, Natural Language Processing, Artificial Intelligence, Computer Systems, Parallel and Sequential Data Structures and Algorithms, Computer Graphics, Functional Programming, Theoretical Computer Science.
- **Mathematics Coursework:** Probability Theory, Honor Linear Algebra, Matrix and Vector Calculus, Honor Real Analysis, Honor Abstract Algebra, Functional Analysis, Measure Theory, Differential Geometry.

SKILLS AND AWARDS

Language/Libraries: C, C++, Python, Java, Fortran, PyTorch, TensorFlow, Mujoco, Numpy, Pandas, Matplotlib.

Developer Tools: VS Code, Git, Github, Vim, Google Colab, Anaconda, Jupyter Lab.

Awards: CMU Summer Undergraduate Research Fellowship, Dean List High Honors, International Young Physicists' Tournament Champion, Princeton University Physics Competition 2nd Place, 2-time AIME Qualifier and top 5% in AMC 12, Chinese Mathematics Olympiads and Chinese Physics Olympiads First Prize.

EXPERIENCE

Amazon

May 2025 – August 2025

Incoming Software Developer Intern

Seattle, Washington

- Incoming **software developer intern** at Amazon.

Carnegie Mellon University | *Deep Learning, Reinforcement Learning*

September 2024 – Present

Undergraduate Research Assistant in Robotics

Pittsburgh, Pennsylvania

- Used **imitation learning** and **reinforcement learning** in loco-mujoco to build **individual-specific physics simulation** for joint torque **from vision data**. Investigate the interactions of **foot models** and **ground reaction force** to better simulate human muscles and joints.
 - Researched **computer vision-based wearable robotic exoskeleton** for improving human mobility. Utilized integrated data from **motion capture**, **vision**, and **sensors** to estimate **whole-body movement and posture**, enhancing efficacy of exoskeleton control.
- Github link: github.com/RunqiuYe/loco-mujoco

Carnegie Mellon University | *Python, Fortran, Data Analysis, Github*

January 2024 – August 2024

Undergraduate Research Assistant in Computational Astrophysics

Pittsburgh, Pennsylvania

- Utilized **Python and Fortran** to develop a **high-precision numerical simulation** for evolution of binary star systems, resulting in simulation of over **1.5 million binary stars** in Pittsburgh Supercomputing Center and **deepened insights of white dwarf formation**.
- Implemented **advanced statistical analysis** with Python to simulation results to study dependency between certain evolution models and binary stars behaviors, resulting in **creation of new models** and **70% more consistent results** between different simulations.
- Received **2024 Summer Undergraduate Research Fellowship Awards**. Github link: github.com/RunqiuYe/post-MT-binaries.

PROJECTS

Computer System Projects | *Computer Systems, C Programming, Parallel programming*

Fall 2024

- Created a **dynamic memory allocator** (malloc lab), a **Linux shell** (shell lab), a **multithreaded proxy server** (proxy lab), and a **parallel file system** (sfs lab) using **system level C**, deepening **understanding of computer system and parallel programming**.

Handwritten Digits Classifier | *Deep Learning, Convolutional Neural Network*

August 2024

- Built a **convolutional neural network** to classify grayscale handwritten digits. **Trained with 60000 images** from the MNIST dataset.
- Tested on 400 examples and **achieved 80% accuracy**. Plan to add more symbol and integrate into **equation to LaTeX translator**.

Text Editor in C | *C Programming, Data Structures*

May 2024

- Developed a **command-line text editor** using **C** from scratch, deepening understanding of **data structures and terminal operations**.
- Utilized **gap buffer** to hold text and achieve **efficient insertion and deletion**, supporting **syntax highlighting**, **file editing and saving**, **custom key bindings**, and **multiple open buffers**. Plan to write **my own Lisp** and develop **scripting language**.
- Github link: github.com/RunqiuYe/text-editor.