Ang Qi

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Los Angeles, CA - 90007, U.S.

Education

- **University of Southern California** *Aug. 2024 - May 2027*
  Major: Applied and Computational Math; Minor: Computer Science Los Angeles, CA, United States
  - GPA: 3.91

- **Beijing Royal School** *Sept. 2021 - May 2024*
  High School Beijing, China
  - Unweighted GPA: 4.19/4.33 (Top 3%)
  - Weighted GPA: 4.74/5.0 (Top 3%)

Experience

- **USC Geometry, Vision, and Learning Lab** *June 2025 - Present*
  Research Assistant Hybrid
  - Implemented deep learning architectures (CNNs, RNNs, Transformers) for vision tasks including image captioning and classification.
  - Worked with transformers, attention mechanisms, and self-supervised learning methods (SimCLR, MoCo, DINO).
  - Applied vision–language models (CLIP, BLIP-2, LLaVA) for image captioning, filtering, and multimodal reasoning.
  - Built scalable ML pipelines for data collection and preprocessing.
  - Reviewed state-of-the-art research on vision–language model evaluation, robustness, and safety, including adversarial testing, negation handling, hallucination analysis, and benchmark design.
  - Conducting research on the safety of state-of-the-art vision–language models (manuscript in preparation).

- **Student Union of the Class of 2024, Beijing Royal School** *Oct. 2021 - May 2024*
  President Beijing, China
  - Organized large-scale student events (field day, flag football, talent show, photography competition) attracting 150+ participants each.
  - Led weekly meetings to collect proposals and improve student engagement.
  - Managed official school social media publications.

- **Laboratory of Microfabrication, Institute of Physics, Chinese Academy of Sciences** *May 2023 - Aug. 2023*
  Research Assistant Beijing, China
  - Assisted in the fabrication of microelectronic device substrates using the lift-off process for terahertz communication.
  - Gained hands-on cleanroom experience with mask aligners, ICPCVD, and electron-beam evaporation systems.
  - Gained experience in ultra-low temperature experiments and quantum transport measurements.

- **Harvard Pre-College Program** *July 2023 - Aug. 2023*
  Student Cambridge, MA, United States
  - Completed a fast-paced, two-week course "Introduction to Relativity: From Cosmic Rays to Black Holes," exploring theories of relativity, Lorentz transformations, and Einstein's field equations using linear algebra and multi-variable calculus.

- **Stanford Pre-Collegiate Summer Institutes** *July 2023*
  Student Remote
  - Studied theories of relativity, quantum mechanics, and particle physics; completed projects on spacetime and special relativity.

Extracurricular Activities

- **International Space Settlement Design Competition** *2022 - 2023*
  Head of Automation Design and Services
  - Coordinated automation design tasks for a 50+ page proposal in LaTeX.
  - Trained teammates in 3D modeling software; contributed to engineering layouts.
  - Team achieved 4th place in the qualifying round and runner-up in Asian regional final (ARSSDC).

Relevant Courses

- **Mathematics & Physics**: MATH-226: Calculus III, PHYS-190: Physics Discovery Series, Math-255: Linear Algebra and Linear Differential Equations, PHYS-161: Advanced Principles of Physics I, MATH-407: Probability Theory (Fall 2025), MATH-432: Applied Combinatorics (Fall 2025), MATH-408: Mathematical Statistics (Spring 2026), MATH-458 Numerical Methods (Spring 2026)
- **Computer Science**: CSCI-103: Introduction to C++, CSCI-170: Discrete Methods in Computer Science, ITP-168: Introduction to MATLAB, CS231n: Deep Learning for Computer Vision, CSCI-104: Data Structures (Fall 2025), CSCI-270: Introduction to Algorithms and Theory of Computing (Spring 2026), CSCI-360: Introduction to Artificial Intelligence (Spring 2026), TAC-216: Applied Python (Spring 2026)

Technical Skills

- **Programming Languages**: C++, Python, Java, MATLAB
- **Frameworks & Libraries**: PyTorch, Numpy, Matplotlib
- **Tools**: Git, Linux, LaTeX

Honors and Awards

- **Academic Achievement Award** *2025*
  University of Southern California [🌐]
- **Outstanding Graduate (Scholarship 50,000 RMB)** *2024*
  Beijing Royal School
- **High Distinction** *2022*
  Australian Science Olympiads Physics [🌐]
- **Outstanding Student (Scholarship 2,000 RMB)** *2022*
  Beijing Royal School
- **Runner-up** *2022*
  Asian Regional Space Settlement Competition [🌐]
- **Outstanding Student Leader (Scholarship 2,000 RMB)** *2021*
  Beijing Royal School

Additional Information

Languages: Mandarin (Native), English (Proficient)
Interests: Soccer, Fishing