

# Ruiyang Wang

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## SUMMARY

CS & DS student with research experience in scalable ML systems and AI adoption patterns. Background in technical computing and visual/media design. Seeking graduate study in AI, visual computing, and controllable generative systems to build creator-centric tools at the intersection of art and technology.

## EDUCATION

### California State Polytechnic University, Pomona (CPP)

B.S. in Computer Science, Minor in Data Science — Expected May 2026

President's List (2023–2024, 2024–2025); GPA: 3.76

### Massachusetts Institute of Technology (MIT)

Data Science & Machine Learning Program (Remote) — Completed Mar 2025

## RESEARCH EXPERIENCE

### Research Fellow — Cal Poly Pomona | Sep 2024 – Aug 2025

Built a modular deep-learning pipeline for network anomaly detection (CIC-IDS2017, PyTorch). Parallelized forward-pass inference with MPI across 32 processes on a CPU cluster, achieving  $\sim 217\times$  speedup vs. a single-process baseline. Benchmarked runtime scaling and memory; ensured output parity with a PyTorch reference (fixed seeds, identical preprocessing). Investigated vertical partitioning and inter-process communication patterns to design a scalable inference pipeline.

### Engage Program — Cal Poly Pomona | Aug 2025 – present

Investigating how generative AI linguistic features influence investor decision-making in equity crowdfunding. Analyzing archival CrowdCube data (2017–2018) and designing preregistered behavioral experiments to measure impact on credibility, novelty, and investment willingness.

## PROJECT EXPERIENCE

### Gen Z Slang Explainer — Cal Poly Pomona GenAI Class | Oct 2025 – Dec 2025

Built autoregressive model to explain Gen Z slang terms by fine-tuning TinyLlama-1.1B (1.1B parameters) using LoRA on dataset of 1.78k Gen Z terms and definitions. Model successfully generated contextual explanations for slang terms and demonstrated transfer learning capabilities by explaining unseen variations and cultural context.

### Future Script Android App — SheCodes | Sep 2025 – Nov 2025

Developed time-capsule messaging app enabling users to send messages to their future selves. Built interactive front-end using XML layouts and ConstraintLayout in Android Studio, implementing 8 responsive screens with custom design system. Collaborated via Git version control.

### MIT Data Science & Machine Learning Program | Nov 2024 – Mar 2025

*Amazon Product Recommendation System:* Built collaborative filtering models on 65K+ ratings dataset; implemented user-based and item-based approaches; evaluated using RMSE, precision@k, and recall metrics.

*EdTech Lead Conversion Classifier:* Developed ML model to predict customer conversion likelihood; performed exploratory analysis, feature engineering, and handled imbalanced data; optimized for business metrics (ROC-AUC).

## LEADERSHIP & WORK EXPERIENCE

### **Chinese Students and Scholars Association (CSSA), Cal Poly Pomona — Vice President | Jan 2024 – Present**

- Lead event planning, media coordination, and member engagement for one of CPP's largest multicultural organizations; organize 6–10 events/semester (60–200+ attendees).
- Managed Instagram and WeChat official accounts; created bilingual posters, mascots, and accessible infographics; produced articles and promotional visuals.
- Serve as CSSA representative at Chinese Consulate (Los Angeles) events, coordinating institutional resources: visa guidance, academic workshops, community connections.
- Developed a Python-based QR code registration tool; streamlined check-ins and data tracking for 500+ event attendees.
- Ran media workshops for new officers (Canva, Xumi).

### **LoopBreakers — Team Founder & Lead | Apr 2025 – Present**

- Founded and lead a cross-disciplinary team for hackathons and technical competitions.
- Information Technology Competition (ITC) 2025: Directed a team of 5 analyzing a utility's energy-consumption trends using Random Forest Regressor + EDA; presented cost-saving recommendations.
- Bronco Hackathon 2025: Led 4 to build a wildfire-alert system integrating Gemini API (natural-language queries) and NASA FIRMS; delivered a full-stack React app.

### **Embassy of Japan — Intern, Beijing, China | Jul 2023 – Aug 2023**

- Processed 50–70 visa applications/day with zero rework; improved verification workflow, reducing cycle time by ~20%.

## TECHNICAL SKILLS

**Programming Languages:** Python, Java, C, JavaScript, Kotlin

**AI/ML Frameworks:** PyTorch, scikit-learn, mpi4py, Pandas, NumPy

**Systems & Tools:** Linux, Git, Docker, Azure, Jupyter Notebook, Power BI, Tableau

**Additional:** UI/UX Design (HTML/CSS), Digital & Traditional Art, Visual & Media Design, Data Analysis, Technical Writing, Bilingual (English & Chinese)