

Zhuoyan Yu

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EDUCATION

New York University Shanghai

Fall 2023 – May 2027 (expected)

B.S. in Computer Science; cumulative GPA: 3.938/4.000

NYU New York study away, Fall 2025 – Spring 2026; GPA during study away: 4.00/4.00.

Coursework: Machine Learning (A), Natural Language Processing (A-),

Computer Vision (graduate; A), Deep Learning (in progress).

PUBLICATIONS

CodeFORGE: Framework for Orchestrated Rare Programming Language Generation and Evaluation

Zhuoyan Yu, Minghao Shao, Yijun Shen, Yichen Zhao, Boyuan Chen, Yik-Cheung Tam, Muhammad Shafique.

International Joint Conference on Neural Networks (IJCNN), 2026. [\[Paper\]](#) [\[Code\]](#)

RESEARCH EXPERIENCE

RepoRevive: Behavior-Preserving Repository Repair

Sep 2026 – Present

Advanced Capstone Contributor; Co-advisors: Yik-Cheung Tam, Muhammad Shafique

- Extended team tooling to collect **15,343 paper records** and **5,283 candidate repository URLs**; implemented provenance tracking and byte-identical offline rebuilding of 96 output files.
- Built output/gradient checks for a PyTorch 1.4-to-2.8 migration: an API-only patch ran all 14 configurations but preserved behavior in 10; a reference patch passed all 14 behavior checks.

LLM Test Reliability and Cross-Model Fault Detection

Jun 2026 – Present

Serendipity Research Project; Co-advisors: Yik-Cheung Tam, Muhammad Shafique

- Designed same-model versus cross-model testing with and without code visibility; built isolated execution and a proxy oracle requiring agreement among three qualified reference programs.
- Completed a 36-problem expansion; **52 faulty programs across 21 problems** supported strict test-strategy comparisons. Static model mixing showed no stable advantage over repeated single-model sampling.

Ant Technologies U.S. – Medical and Healthcare AI Lab

May – Aug 2026

Algorithm Engineer Intern (Research); Research supervisor: Long Xie

- Developed nnU-Net v2 pipelines and controlled ablations for cerebral microbleed and lacune detection in multimodal MRI, including spatial alignment and data validation.
- Improved microbleed lesion-level F1 from **0.533 to 0.557** on 72 VALDO cases using internal five-fold out-of-fold evaluation with cross-fitted thresholds.

CodeFORGE: Rare and Legacy Code Generation

Sep 2025 – Apr 2026

Serendipity Research Assistant; Co-advisors: Yik-Cheung Tam, Muhammad Shafique

- Built a benchmark of **1,196 verified tasks across 12 rare and legacy languages**; separated canonical solution synthesis from input/output test generation with a two-model pipeline.
- Implemented Docker-based pass@k evaluation, model cascading, feedback-driven resampling, and API cost controls.

ACADEMIC PROJECTS

MYGO: Geometry-Aware Depth ControlNet [\[Code\]](#)

Sep – Dec 2025

Computer Vision Course Project; Instructor: Saining Xie; Course grade: A

- Co-designed 18-channel depth conditioning for SD1.5 ControlNet (raw depth, 16 ordinal layers, and occlusion boundaries); contributed to initial code setup, maintenance, and the final report.
- Team evaluation on a 50k-image COCO subset reduced FID from **84.0 to 74.3** at 20k training steps (1k generated samples), with mixed depth and occlusion results.

HONORS & DISTINCTIONS

Computer Networks (NYU): 2nd overall; 1st excluding extra credit

Spring 2026

Best Innovation Award (Curistro team), NYU Shanghai [Digital Innovation Challenge](#)

NYU Shanghai Outstanding Student Worker Award

2025

NYU Shanghai Dean's List (academic years)

2023–24, 2024–25, 2025–26