Shengtao Yao

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EDUCATION

New York University *Sept 2022 – Now*
Bachelor's Degree in Computer Science

- GPA: 3.9/4.0
- **Selected coursework:** Operating System, Parallel Computing, Applied Internet Technology, Intro to Robotics, Probability, Ordinary Differential Equation, Machine Learning, Deep Learning, Computer Vision, Embodied Learning and Vision

WORKING EXPERIENCE

Courant Institute of Mathematical Sciences *New York, NY*
Research Volunteer, advised by Prof. Sumit Chopra *Sep 2025 – Jan 2026*

- Develop a volume-level prostate cancer classifier using raw multicoil MRI dwi kspace data

Huawei Technologies Co., Ltd. *Shanghai, China*
Software Engineer Intern *June 2024 – Aug 2024*

- Manage thread pools and write SDK to Level 2 Radio Access Technology Software
- Designed and implemented a solution to map application models to fixed cpu IDs, improving system efficiency by reducing excessive cpu usage.
- Add mechanism to automatically clean up zombie processes and optimized cpu allocation through virtual cpu pools, improving system throughput.
- Monitor performance using hot functions generated from **perf**

TEACHING EXPERIENCE

Courant Institute of Mathematical Sciences *New York, NY*
Teaching Assistant, Operating System *Sept 2024 – Dec 2025*

- Wrote and tested automatic grading scripts for OS labs; hold Office Hour; Grade

COMPETITION AND HONORS

Codeforces *Codeforces Profile* *Sep, 2024 - Now*
Dean's List for Academic Year, New York University *2023, 2024, 2025*

PERSONAL PROJECTS

IMURU (Handwriting Style Generation with VAE and Autoregressive Transformer)
Generative modeling project on real-world handwriting datasets *IMURU*

- Develop an autoregressive handwritten text image generation pipeline, using a T5 Transformer encoder decoder architecture for style-conditioned text2image synthesis.
- Train, evaluate, and debug models using PyTorch on NYU Torch Cluster, and deployed an interactive demo for qualitative inspection and comparative analysis.

Clean Stable Diffusion *Clean Stable Diffusion*
A simple reimplementation of Stable Diffusion Inference Pipeline in HF Diffusers

Recurrent JEPA for Trajectory Representation Prediction *JEPA*
A recurrent world model predicting future state representations of an agent in a two-room environment

Weensy OS *Weensy OS*

A small OS implemented in Assembly, C

- Develop kernel-level process scheduling to efficiently manage context switching and execute runnable processes.
- Build comprehensive virtual memory management functions, page table checks, ownership validation, and memory mapping visualization, supporting 2 MB physical and 3MB virtual memory

SKILLSET

Language & Tools: Python, C/C++, Java, Javascript, R, Ocaml, Pytorch, Docker, Spark, Pandas
Machine Learning: Generative Model, HPC research toolkits