Zhen Tao Pan

917-215-3215 | zhentaop118@gmail.com | linkedin.com/in/zhen-tao-pan-4045a52a0 | github.com/MorningZephyr

EDUCATION

The City University of New York - Hunter College — New York City, NY
Bachelor of Arts in Computer Science and Mathematics (GPA: 3.89) — *Aug 2023 – May 2027*

EXPERIENCE

Discrete Math Teaching Assistant and Tutor — Aug. 2024 – Present
Hunter College — *New York City, NY*

- Collaborated with the professor to design challenging exam questions for **350+** students, emphasizing abstract reasoning and critical thinking in discrete mathematics
- Mentored students in mastering core topics—including logic, mathematical proofs, combinatorics, and set theory—through visualization and Socratic questioning
- Consistently praised by students for clear, adaptable explanations tailored to varying levels of understanding
- Contributed to a **25%** average exam score increase and credited by several students for course success

Google Software Engineering Program Mentee — Jul 2025 - Present
Basta X Google — *New York City, NY*

- Selected as one of 216 students from 2,600+ applicants for a 10 week mentorship with a Google Software Engineer focused on improving data structures and algorithms, and technical interview prep

Data Analyst Intern — Jul 2024 - Aug 2024
The Jasco Group — *New York City, NY*

- Conducted fundamental analysis on company financial and stock quality, leveraging **Python**, **Matplotlib**, and Google Sheets for data visualization
- Researched and drafted business plans, analyzing market opportunities, evaluating financial viability, and structuring investment strategies
- Received **2nd** place for Best Intern out of 20+ colleagues, recognizing outstanding performance

PROJECTS

CodeWatch (Winner) | *AI/ML Track (HunterHacks)* | [Reference]   [Github]

- Developed and optimized an AI code detection service inspired by the AAAI 2025 paper *"Uncovering LLM-Generated Code"*, achieving **85%** accuracy through a custom problem-extraction technique comparing original and rewritten code snippets
- Architected a **dual-model pipeline** leveraging CodeT5+ for semantic vector embeddings and GPT-4o-mini for code rewriting, enabling **sub-60s detection latency** with scalable inference via the **model singleton pattern**
- Fine-tuned GraphCodeBERT using **PyTorch**-based SimCSE contrastive learning on CodeNet's C++ corpus, improving vector embedding quality and reducing false positives by **40%** over the base model

Game Automation | *Python*   [Github]

- Created a script for a web-based game for **automating** mob clearance with minimal manual intervention
- Utilized **PyAutoGUI** and its **image recognition** techniques to identify valuable mobs, preventing accidental elimination by halting the script when needed with sys.exit
- Developed a self-checking defense mechanism within the code, utilizing counters and if statements to detect unexpected events and ensure the program halts safely upon unexpected events
- Designed dual-window automation system to efficiently manage two game accounts simultaneously, **doubling** game currency acquisition

TECHNICAL SKILLS & AWARDS

Languages: Python, C++, JavaScript, HTML/CSS
Frameworks: Next.js, Flask, Tailwind CSS
Developer Tools: Git, Github, VS Code, Vercel, Render, UptimeRobot
Libraries: pandas, Matplotlib, PyAutoGUI, pytorch, React
Awards/Certificates: **America Needs You Fellow**; Arthur L. Meyer Memorial Award For Superior Excellence In Math; AP Scholar with Distinction; Dean's List; Certificate of Achievement: Codepath Intro to Web Development