Andy Zhou

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Education

New York University - Courant — New York, NY
Masters of Science Computer Science — *Sep 2025 - Dec 2026*

The City College of New York — New York, NY
Bachelors of Engineering in Computer Engineering, GPA: 3.6/4.0, Magna Cum Laude — *Sep 2018 – May 2023*

Technical Skills

Languages: Python, C/C++, Java, Javascript, MATLAB & Simulink
Tools & Frameworks: Linux, Pytorch, Git, Android Studio, React Native, Firebase, Google Cloud, NoSQL, SVN

Experience

Software Engineer 2 — Aug 2024 - Present
GEICO — *New York, NY*
- Optimized GEICO's Android application to efficiently collect gyroscope data for real-time risk assessment and car insurance pricing, reducing battery and hardware consumption using Kotlin, Android Studio, and Firebase

Software Engineer — Jul 2022 - Aug 2024
Productify — *New York, NY*
- Leading the development of a universal application that helps people with ADHD/Autism become more productive by having the most commonly used productivity tool all under a single easy to use application
- Utilizing React Native framework to build a cross-platform application that work seamlessly on all mobile devices and operating systems, and implemented Google Cloud backend to synchronize user settings under a single account
- Won 1st place in the Zahn Innovation Center Business Competition, awarded a grant of $30,000 for the business

Participant — Feb 2023 - June 2024
Google Software Engineering Program — *New York, NY*
- Selected 3 times as one of 80 participants, outperforming 2100+ total applicants, to participate in 10 weeks of rigorous, technical mentoring sessions with Google SWE to enhance technical problem-solving and interview skills

Software Engineer Intern — Jun 2022 – Aug 2022
Northrop Grumman — *Dulles, VA*
- Developed and debugged flight software for ESPAStar product line satellites using low level programming language such as C++, embedded systems programming methodologies, and processor-in-the-loop simulations
- Enhanced reliability of 9 embedded systems code by files by updating the code, improving functionality in edge cases, improving consistent test pass score to 100%, allowing files to be pushed to production
- Fostered effective communication and collaboration with the team using detailed project and bug reports, continuous Kanban based updates, and timeline updates during Agile-based half-weekly meetings

Lead Researcher — Jun 2021 – Dec 2021
Montclair State University — *Montclair, NJ*
- Generated a software security assessment model that employed software metrics to identify threshold on which file can be interpreted as potentially vulnerable, improving secure software development and coding methodologies
- Programmed a website application using Python, Streamlit, and Google Cloud that evaluated user code and flagged low code metrics based on threshold values containing metrics of 250 total open-source vulnerable and fixed code
- Successfully presented and published peer-reviewed research in the IEEE BigData 2021 Special Symposium
- Awarded "Most Entrepreneurial Hack" and "Best Use of Google Cloud" out of 65 total projects at SBUHacks 2021

Projects

Harvard Pac-Bot Robotics Competition | *Python, C++, Arduino, Raspberry Pi, Zenhub* — Jun 2021 – Apr 2022
- Led a 12-member team in designing and building an omnidirectional wheel autonomous robot that mimicked Pac-Man in a 3D environment using A* algorithm with heuristics and UART communication protocols
- Implemented vector-based self-correction algorithms for an omnidirectional-based movement system using C programming language, time-of-flight sensors, and a 9-axis gyroscope, improving score by an average of 80%
- Developed a reinforcement learning model, after competition, using Python,Stable Baselines3 library for DRL algorithms and OpenAI Gym for creating the Pac-Man environment, increasing means score by 200%
- Achieved 3rd place overall, surpassing top universities such as Princeton, Columbia, and Tufts University by score