Ryan Zhang

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EDUCATION

Columbia University − **GPA 4.08**   NY, NY
Bachelor of Arts in Computer Science | John Jay Scholar   *Expected May 2028*

Eleanor Roosevelt High School − **GPA 4.04**   NY, NY
Salutatorian   *Sept 2020 – June 2024*

EXPERIENCE

Junior Research Assistant   July 2023 – Present
Machine Learning for Good Lab, NYU Courant   *NY, NY*
- Researching algorithmic bias by applying a custom Bayesian model to learn and understand judges' decision making
- Designed and implemented a ML pipeline (model implementation, data collection, training, visualizations) from a PhD student's calculations
- Increased model speed by 60x by linearizing key functions, improving experimental iteration speed by 10x
- Created complex synthetic datasets and proved model convergence, a critical step in the research process
- Built a comprehensive real-world dataset by matching two separate databases; further increased dataset size by 30% through creatively using previously unusable data points
- Presented research at ARISE colloquium and bi-weekly lab meetings
- Training model on the real-world dataset; working towards publishing a paper

Endless Frontier Labs Young Ambassador   Sept 2023 – June 2024
Stern School of Business NYU   *NY, NY*
- Shadowed world-class startup founders and investors with MBA students on the Digital Tech Track
- Networked with entrepreneurs and investors; Learned about venture capital and startup ecosystem

Small Business Manager (Family Owned)   Jan 2020 – Sept 2024
Christopher Cleaners   *NY, NY*
- Strategized business expansion; conducted local dry cleaning market analysis
- Increased profits by 50% while managing newly opened branch; built online presence through google/apple maps
- Responsible for customer service, managing employees, and handling finances; solved real-world problems
- Maintained a 5 star rating on google maps; worked 12 hour shifts, 6 days a week

PROJECTS

Robo-AutoScript | *Python, Streamlit, RobotC, OpenAI API, Git*   July 2022 – Jan 2023
- Led team to win 2nd place in District 2 for the Congressional App Challenge
- Conceived a language to action paradigm for robotics in sophmore year of high school
- Developed working prototype with a dashboard interface, voice recognition, and automatic execution

Wave Generator | *C, Arduino, Python, Streamlit, Robotics, Git*   Jan 2023 – May 2023
- Built the entire control stack from scratch in C for a Wave Generator
- Created a GUI interface that communicates to the Arduino wirelessly using MQTT protocol
- Wired the motors, motor controller, and Arduinos into one compact system

Mini Projects | *Python, Streamlit, Git, Pygame*
- Created a data-dashboard that approximates a CO_2 Dragster's racetime using Newtonian Physics (2022)
- Built Space Invaders copy using Pygame and OOP principles (2020)

AWARDS

Regional Gold Medalist HS SciOly (Fermi's Questions) : Back-of-the-envelope calculations and logical approximations
NYC Scholastic Award Gold Key (Photography) : Photography was displayed in the Metropolitan Museum of Art
NYPL Teen Magazine Contest (1st Edition): Photography was published and distrubted to all NYPL branches
Student Filmmaker Award (Cinematographer) : Showcased in the Shops Of New York Short Film Festival

TECHNICAL SKILLS

Languages: Python, Java, C (Adv. Beginner), HTML/CSS
Frameworks: Streamlit, Flask
Developer Tools: Git, Docker, VS Code, Vim, Linux, WSL, JupyterNotebooks
Libraries: pandas, NumPy, Matplotlib, seaborn, scikit-learn