Ryan Ting

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EDUCATION

Purdue University, West Lafayette, IN **Expected May 2025**
Bachelor of Science in Industrial Engineering

RESEARCH

Purdue Mechanism and Robotic Systems Lab (MARS) *Undergraduate researcher* **December 2021-Present**

- Constructed a prototype utilizing 3D printed components, completed hardware and most controlled movement in motors.
- Created a complete CAD model to show arm assembly and feature animations for sliding and rotational components.
- Iterated through numerous process improvements and redesigns to achieve optimal functionality and cost.
- Designed a first of its kind a versatile three finger robotic gripper where each finger can rotate along its base and has 5 degrees of freedom with 2 translational and 3 rotational degrees of freedom around the xyz axis.
- Engineered the robotic arm with versatility and dexterity potentially surpassing human capabilities in single-object manipulation.

LEADERSHIP

Purdue ARC (Autonomous Robotics Club): Dog Copter *Project Manager* **Dec 2022 –** Present

- Proposed a first of its kind project to combine a drone with a robotic dog, securing approval and funding for its execution.
- Pitched the endeavor at the callout and successfully recruited 20 members to work on the venture.
- Led and organized the project, providing planning documents and Gantt chart to clarify the overall structure, objectives of the subgroups and dependencies relationships.
- Appointed a team lead for each subgroup to create more effective delegations, organized meetings to ensure strong communication and clear objectives among members, improved efficiencies and provided support for those who need guidance.
- Developed a MATLAB optimization program considering 15+ parameters, including weight, power consumption, and torque, to identify the optimal solution.

WORK EXPERIENCE

Impact Kickboxing Marketing/Receptionist **June 2021 – July 2021**

- Established a weekly routine: posting 10 social media flyers for Impact, with captivating captions and promotional messages.
- Provided services to over 20 customers per shift from checking in, teaching the basics of kickboxing and putting on boxing wraps.
- Managed daily operations such as stocking the fridge and shop, refilling the water, along with other miscellaneous things.

Dairy Queen *Cashier* **July 2022 – Aug 2022**

- Greeted 50 Customers per shift, registered orders, collected payments, and assisted with customer needs.
- Memorized recipes and blended desserts such as Blizzards and ice creams with precision, created 20 in a shift.

SCHOOL/PERSONAL PROJECTS

Personal Project: Stock-bot **July 2022 – Present**

- Developed and tested a security trading algorithm by leveraging the Python3 Alpaca streaming API to automatically analyze and execute trades using real stock and crypto data.
- Utilized OOP to work with multiple stocks and crypto assets.
- Build and deployed the automated trading service in a Docker container.

Personal Project: Auto typer **March 2022 – March 2022**

- Programed an Auto typer using a Python library's OpenCV and PyAutoGUI to select and automatically type a chosen region.
- AutoTyper achieved a consistent 200 WPM in typing games such as Nitro Type and TypeRacer.

School project: Walking Platform **January 2021 – June 2021**

- Conceived, proposed, and budgeted a project for a high school engineering class.
- Designed and 3D-Modeled a walking platform utilizing Theo Jansen Walking mechanism to walk and balance load on top.
- Coded a control system using Arduino to control robot using a joystick where it can rotate and move linearly.
- Assembled and 3D-Printed 20 components walking platform.

PERSONAL EXPERIENCE

Volunteer Experience: Fiji Service Trip **October 2019 – November 2019**

- Built a sidewalk with a team of 20 to ensure feet protection from the unsanitary ground. I persisted during breaks while others rested.
- Painted walls of various local houses to improve the local infrastructure and Fijian lives.
- Cooked and distributed food to alleviate hunger and ensure sustenance among locals.

SKILLS

- Programing skills: Python, HTML,CSS,C++, C, Arduino, MATLAB, JavaScript, Docker, GIT
- APIs: Discord.py, Discord.js, Back-trader, bta-lib, Alpaca, Matplotlib, Pandas, PyAutoGUI, OpenCV
- Softwares: SketchUp, Fusion360, Onshape, Excel, PowerPoint, Word
- Engineering tools: 3D printer, Bandsaw, Drilling Machine, Milling Machine