Brian Hou

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SUMMARY

Seeking a dynamic internship as a hands-on mechanical/robotics engineer, specializing in designing and analyzing automation-focused mechanical equipment.

EXPERIENCE

Head of Mechanical Design
ASU VEX Robotics Varsity **August 2022 - Present, Mesa, Arizona**

- Mechanical head of the Rossum Rumblers and PYRO robotics team.
- 3D design using Solidworks for complex mechanisms such as PTO drivetrain.
- Responsible for 2 robot designs, testing, construction, and troubleshooting.
- Programming debugging using C++ and C.

Founder & Mechanical/Design Lead
VEX Robotics Varsity in KCIS **June 2019 - May 2022, Taipei, Taiwan**

- Became the National Champion of Taiwan, beating the defending champions 2 times.
- Founded the school robotics team and led over 5 mentoring sessions for newcomers.
- Designed and constructed several winning VEX robots.
- Led the varsity team to win 5+ awards in various national and international competitions in just 3 years.
- Successfully promoted VEX as one of the most popular clubs in the school.
- Founded a VEX Discord group and answered members' questions to mentor newcomers after graduation.

PROJECTS

IB Personal Project-Building a Go-kart
International Baccalaureate • August 2021 - April 2022

- Design and construct a functional go-kart that can withstand the weight of a teenage person(around 60-70 kg).
- Fabricated structural components using 1 piece of 70x160cm plywood and PVC pipes to construct the chassis of the go-Kart and assembled components to create a strong and rigid structure.
- Successfully conceptualized and constructed a go-kart project from scratch.
- Utilized a range of tools and equipment effectively to ensure precise measurements, accurate assembly, and quality craftsmanship.

EDUCATION

Robotics Engineering, BSE
Arizona State Unioversity • Mesa, Arizona • 2026 • 4.0

CERTIFICATIONS

Emergency First Response
P.A.D.I • 2022

Demonstrates my proactive approach to ensuring safety in various work and recreation environments

INVOLVEMENT

World Championship Expedition Crew
Arizona State University • PYRO Robotics, Rossum Rumblers Robotics • May 2022 - Present

- Won the world's highest award for robot construction, 3rd consecutive year.
- Built the most discussed robot at the championship event, and awarded an interview on the mainstage.
- Became one of the three most important members of the team within the 1st year of joining.

SKILLS

3D Mechanical Computer-Aided Design: Solidworks, GrabCad, Autodesk, OpenScad

Mechanical Construction: Workshop Machines (Bandsaw, Drill press, etc..), workshop tools (Screwdriver, hammer, drill, etc..)

Front End: HTML, CSS

Back End: C++, C, Python, Arduino