

# ALEJANDRO STOEHR ITO

(857) 201 2846 | stoehrito.a@northeastern.edu | Boston, MA | [LinkedIn](#) | [Engineering Project Portfolio](#)

---

## EDUCATION

**Northeastern University – College of Engineering**

Boston, MA

*Candidate for Bachelor of Science in Mechanical Engineering*

May 2028

**Minors: Mathematics & Music Performance**

**GPA: 3.62**

**Honors & Awards:** John Martinson Honors Program, Dean's List (Spring 2025)

**Activities:** Pi Tau Sigma (National Honors Mechanical Engineering Society) – Executive Board Member, NU Concert Band (Trumpet), AeroNU (NULI Airframe Team), NU Theme Park Engineering Club (TPEC)

**Relevant Coursework:** Mechanics of Materials, Material Science, Diff Eq & Linear Algebra, Statics, Cornerstone of Engineering 1&2

**Hong Kong International School**

Hong Kong

*High School Diploma*

May 2024

**Activities:** Teaching Assistant for Honors Physics, Wind Ensemble (Trumpet Section Leader), AMIS Honor Band, Varsity Tennis

---

## SKILLS & CERTIFICATIONS

**Skills:** SolidWorks, AutoCAD, OpenRocket CAD, Circuits & Sensors, MATLAB, NoLimits 2, Python, Arduino, FVD++, Teamwork

**Certifications:** Computer Science – Python ([Credential](#)) · VEX EXP Educator ([Credential](#))

---

## PROFESSIONAL WORK EXPERIENCE

**VEX Robotics**

Hong Kong

*Robotics Educator & Research Intern*

May - June 2025

- Conducted a study of ~150 APAC schools to identify opportunities for robotics curriculum and classroom integration
  - Earned 3 VEX Robotics Educator certifications; built and programmed the VEX EXP robot using Python
- 

## ENGINEERING PROJECTS

**Inverted Pendulum Stabilization System (Personal Project)**

Spring 2026 - Present

- Model and fabricate 3D-printed pendulum parts in SolidWorks to assemble a closed-loop inverted pendulum system
- Implement and tune PID control on Arduino with IMU feedback to stabilize the inverted pendulum

**Rocket Airframe Design – Northeastern University; AeroNU (NULI Airframe Team)**

Fall 2025

- Designed and simulated a liquid-propulsion rocket airframe using SolidWorks and OpenRocket, achieved ~1000 m apogee
- Produced detailed 3D CAD assemblies and specified recovery system components, including parachutes and shock cords

**NU Theme Park Engineering Club (TPEC) – Northeastern University; Ride Engineering Competition Team**

Fall 2025

- Built a small-scale amusement ride system using SolidWorks, NoLimits 2, Arduino, and FVD++
- Designed and 3D-printed an RFID chip holder and programmed an Arduino-based wearable RFID access system

**Mechanical Sequencing and Control System – Northeastern University; Cornerstone of Engineering Project**

Fall 2025

- Developed and prototyped a 6+ stage sequencing system for a Rube Goldberg machine using AutoCAD for fabrication
  - Integrated and Python-programmed 2 servo motors, 3 sensors (tilt, limit, motion), to achieve a final run with 0 interventions
- 

## RESEARCH EXPERIENCE

**Undergraduate Research Assistant**

Boston, MA

*Northeastern University, Dept. of Mechanical Engineering & Bioengineering*

Spring 2026 – Present

- Participate in weekly research meetings on musculoskeletal mechanobiology and skeletal biomechanics
- Support computational modeling and image analysis projects; develop MATLAB and data analysis skills

**Undergraduate Research Assistant (Trainee)**

Boston, MA

*Northeastern University, Dept. of Mathematics*

Fall 2025 – Present

- Prepare to assist in research on kinetic plasma models, including relativistic Vlasov–Maxwell and Vlasov–Poisson systems
  - Build foundations in MATLAB, stability analysis, and wave propagation for computational research support
- 

## ADDITIONAL COMPETENCIES

**Languages:** English (Fluent), Spanish (Fluent)

**Interests:** Trumpet performance & festivals (Received “Performance with Distinction” for AMIS Solo Festival), Competitive tennis