Daniel Xu

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EDUCATION

Georgia Institute of Technology   **Atlanta, Georgia**
B.S. in Mechanical Engineering   *Expected Graduation, 2027*
- o **GPA:** 4.0
- o **Related Coursework:** Computing Techniques, Engineering Graphics and Design, Engineering Materials

SKILLS

Tools: CAD, SolidWorks, Fusion360, OnShape, CATIA, Office, Excel/Sheets, VSC, AWS, Google Colab, Unity, ROS, Git, Xometry
Programming: Java, Python, JavaScript, C#, MATLAB, Arduino, ROBOTC/C, C++ , R Studio
General: Rapid Prototyping, Experimental Design, Verbal and Written Communication skills, Problem Solving

EXPERIENCE

Laboratory for Intelligent Decision and Autonomous Robots   **Atlanta, Georgia**
Undergraduate Researcher   *Aug 2025– Present*
- Building perception-based potential gap detection and navigation system for the Go2 quadruped robot in ROS. Uses camera and laser scan data to conduct 2D gap-navigation policy.
- Designing next-gen robotic feet for the Cassie biped to improve traction and terrain adaptability by building in sensors into soles to determine foot grip/actuation decisions.

Happy Hackers Foundation   **Vancouver, British Columbia**
Co-Director   *Aug 2023 – May 2024*
- Organized monthly hackathons, workshops, algorithmic coding competitions garnering a community of 600+ participants from 28+ countries
- Raised $50000+ from sponsors such as Echo 3D, CoCalc, Microsoft, and Axure by designing sponsorship packages and cold emailing companies.
- Organized online workshops with NYU Robotics Design Team, Postman API, and Harvard Algorithm Design Professors

Funfhundert Plus   **Richmond, British Columbia**
Car Salesman   *Jul 2023– Sep 2023*
- Personally managed clients, handled negotiations for trade-in deals, phone calls, and designed online advertisements
- Prepped for appointments, washing, and detailing vehicles for myself and other salesmen

PROJECTS

CanSat   **Drumheller, Alberta**
Team Lead   *Jan 2023 – Apr 2023*
- Built a can-sized device that is launched via model rocket and transmits atmospheric data that it collects live to a yagi antenna ground station (over 1000 data points)
- Designed a controlled landing mechanism, employing a parachute cutaway sequence, and flip-out drone propellers
- Won Technical Achievement Award at Canadian Satellite Design Challenge

Robotic Violin   **Philadelphia, Pennsylvania**
Partner Project   *Jul 2023 – Jul 2023*
- Built a robotic violin that plays arrangements of various pieces based on UDP wifi signals that it receives.
- Designed on CATIA and controlled by arduino code written for ESP32 dev modules with servos and DC motors.
- First robotic violin built at the University of Pennsylvania (including all level programs)

*** More details + engineering and coding projects in portfolio on Linkedin ***

ACTIVITIES AND LEADERSHIP

Georgia Tech's Hytech Racing Team (Electric Formula SAE)   **Atlanta, Georgia**
Member of the Mechanical Controls Subteam   *Aug 2024 – Present*
- Designed the current acceleration and brake controls, using CATIA design to ensure function and ergonomics.

Georgia Tech's RoboJackets   **Atlanta, Georgia**
Member of the Mechanical Robo-wrestling team   *Aug 2024 – Present*

Georgia Tech Ice Hockey   **Atlanta, Georgia**
Player   *Aug 2024 – Present*
- Play as a member of the Georgia Tech ice hockey team in the American Collegiate Hockey Association (ACHA)