Justin Peng

Atlanta, GA 30332 | (770) 362-5723 | jpeng319@gatech.edu | www.justinpeng.ca

Objective

Georgia Tech Electrical Engineering student seeking a summer 2026 internship. Named "2024's Brightest Young Innovators" by Hudson Weekly and featured on Crimson's 18 under 18 list. Dedicated 2000+ hours across 5+ years to pioneering assistive technologies for the visual. 30+ national and international awards totaling over $190,000. Published researcher, TEDx speaker, and patent holder, with innovations that have been showcased on magazine covers and national stages.

Education

Georgia Institute of Technology (GT), Atlanta, GA
Bachelor of Science in Electrical Engineering

Work Experience

NavAbility Technologies, *Founder,* Atlanta, GA Sep 2022 – Present
Building the next generation of white cane for 43 million visually impaired individuals.

- Developed custom PCBs for a 3-wheel Kiwi drive system; optimized power rails for high-current motor loads and signal integrity for low-voltage logic. Designed chassis and sensor mounts in SolidWorks and Fusion.
- Integrated Intel RealSense D457 depth camera, ESP32 microcontroller, and IMUs with Nvidia Jetson Orin Nano via high-bandwidth I2C/SPI to drive real-time collision avoidance and spatial mapping.
- Managing a pre-seed venture and pitching top investors (e.g. Y Combinator, PearVC). 30+ national and international awards totaling over $190,000. Dedicated 2000+ hours across 5 years. First-author publication on Journal of Student Research. Filed 2 USPTO Provisional Patents (No.63/560,754, No. 63/560,719). Ranked top 40 most impactful Canadian Youth Initiatives.

Rove, *Business Development Intern,* New York, NY June 2024 – August 2024
YC-backed startup (W24) developing a points-as-a-service fintech platform

- Directed a team to create a comprehensive pricing strategy for Rove Miles.
- Introduced a subscription-based revenue model that offers benefits like lower transaction fees, priority access to miles, and customized pricing to incentivize banks to commit to long-term partnerships

Honors

Stanford TreeHacks – Grand Prize Winner, Overall 2nd Place.

- #2 overall out of 1000+ competitors at the world's most prestigious and largest collegiate hackathon.
- Built an agentic AI surgical robotics platform enabling multi-arm autonomous control via custom inverse kinematics, RealSense-based 3D mapping, multi-model vision (SAM, YOLO, Gemini Robotics ER 1.5), and formally verified safety-constrained trajectories in Lean.

Crimson's 18u18 list - Top 18 Most Influential Youth Under 18 Years Old

- Selected as one of the top 18 most impactful youth globally under 18 years old for founding NavAbility, representing 15 countries, with an acceptance rate of <1%. Evaluated by judges from the Forbes 30 Under 30 list

Front Cover of the Shaughnessy Magazine (June edition, 2024)

- Cover Title: "Prodigy and Innovator. Changing The Assistive Tech Industry"

Canada Wide Science & Engineering Fair, 2x Gold Medalist, 2x Silver Medalist & Category Award

- Competed and won against the top 1% of student innovators across Canada for four consecutive years.

Skills

Hardware & Embedded: KiCad, I2C/SPI/UART, MOSFETs, Op-Amps, BLDC Control, IMUs, Soldering, 3D printing
Software: C/C++, Python, Java, SolidWorks, Fusion 360, Oscilloscopes, Signal Generators, Arduino IDE, Visual Studio Code
Languages: English (native), Chinese (intermediate)

Activities

Robojackets | Electrical Team Member August 2025– Present

- Developed a Robot Shell ID system for 6 autonomous RoboCup robots using a custom PCB integrated with a Teensy 4.1 microcontroller.
- Designed a compact PCB in KiCad utilizing 5 TCS34725 RGB sensors, an I2C multiplexer (MUX) for bus arbitration, and an LDO-based 3.3V power delivery system with reverse-polarity protection. Implemented hardware-level debugging infrastructure, including I2C pull-up resistors and debug headers to ensure signal integrity across high-speed data lines.