

George Kopf V

Electrical & Computer Engineering | Minor in Robotics
Princeton University

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Profile

I am an Electrical & Computer Engineering undergraduate with hands-on research experience in bioengineering, robotics, electrical engineering, manufacturing, and mechatronic system design. Strong interest in bio-inspired robotics and biologically integrated systems.

Education

Princeton University, Princeton, NJ

B.S.E. Electrical & Computer Engineering, Minor in Robotics
Aug 2023 – May 2027 (Expected)

Princeton High School, Princeton, NJ

Aug 2019 – May 2023

Research & Experience

Scientific Researcher — Kent State University (REU)

Jun 2025 – Aug 2025

- Used an adjoint-based gradient descent optimization algorithm to simulate and optimize fish swimming gaits. Worked in algorithm characterization and biological analysis.
- Designed a sensor array for measuring temperature gradients of a custom-built Crookes radiometer.
- Worked with researchers at the Cleveland Clinic to write control software for an experimental apparatus designed to measure the fluid dynamics of water moving through deformable tubing.
- Project was one of two chosen to present at the inter-program Undergraduate Research Conference.

Scientific Researcher — Princeton University (iGEM)

Jun 2024 – Aug 2024

- Engineered novel probiotic bacteria therapy for ulcerative colitis treatment.
- Designed and fabricated microfluidic test chambers for biological response measurement.
- Project awarded 2024 iGEM Gold Medal.

Retail Service Worker — True Value Hardware

Jun 2022 – Sep 2022

Extracurricular Activities

Princeton Racing Electric (FSAE & F+HE)

- Electrical and mechanical design for student formula electric race car.
- Leads the water cooling system subteam and works on carbon fiber layups. Work involves Siemens NX CAD, systems integration, thermal analysis, and composites.

Princeton University Robotics Club — Team Lead

- Electrical team lead for the bioinspired Hexapod project; works with Raspberry Pi, ESP32 wireless, PCB design, joint control, and mechatronic integration for the custom design of a six-legged walker robot.

Princeton Tower Club Bicker Committee — Treasurer

- Determines and distributes budget within Bicker Committee.
- Acts as a mediating role, coordinating between Board and members of the Eating Club.