# George Kopf V

Electrical & Computer Engineering | Minor in Robotics
Princeton University

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My Portfolio: https://gkopf5.github.io/

## 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.