

# YAJIE LI

[yli92@tulane.edu](mailto:yli92@tulane.edu) | +1 (504) 715-8858 | [yajie-li.com](http://yajie-li.com) | [linkedin.com/73401b359](https://www.linkedin.com/in/yajie-li-73401b359)

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## EDUCATION

TULANE UNIVERSITY | SCHOOL OF SCIENCE AND ENGINEERING | PRE-MED TRACK

New Orleans, LA

### Bachelor of Science in Engineering

May 2029

Major: *Biomedical Engineering* | Minors: *Mechanical Engineering, Math* | GPA: 4.00

- *Relevant Coursework:* Synthetic Biology Project: Hands-on experience with CRISPR, including PCR, sequencing, cell culture, and other techniques, through collaborative research submitted to Global Open Genetic Engineering Competition (GOGEC).

## EXPERIENCE & PROJECTS

Microphysiology & Magnetic Resonance (MMR) Lab at Tulane University

New Orleans, LA

### Undergraduate Student Researcher

Sep. 2025 – Present

- Build a biaxial tensile stretcher machine to validate biomaterial properties measured with a tabletop MRI machine.
- Replace magnetic metal components with 3D-printed or other non-magnetic materials to prevent MRI interference.

Exoskeleton Arm/Leg Module

### Independent Personal Project

Aug. 2024 - Present

- Design a robot arm and leg module with a string-based transmission and capstan-drive actuation to synchronize with human motion. Assemble and solder the components to interface with a Raspberry Pi for control.
- Prototype a low-cost solution to reduce arm fatigue during intricate tasks and assist with lifting heavy objects.
- Future iterations directly integrate the device onto the limbs.

Tulane Formula Racing

New Orleans, LA

### Drivetrain/Engine Team

Aug. 2025 - Present

- Fabricate and assemble the drivetrain and engine, and integrate it with other components to build a competition-ready Formula SAE car.
- Create CAD models and render the drivetrain and engine assemblies using Fusion 360.
- Collaborate with teammates to optimize the fabrication and integration of different parts of the vehicle.

Tulane University Reily Recreation Center

New Orleans, LA

### Membership Services

Jul. 2025 - Present

- Provide customer service at the front desk by assisting patrons with inquiries and resolving any issues they may encounter.
- Manage memberships, registrations, renewals, and account maintenance to ensure accurate records and smooth operations.

## CAMPUS LEADERSHIP

Tulane Rocketry

New Orleans, LA

### Board Member

Aug 2025 - Present

- Founding member: Organize and launch the rocketry club at Tulane by helping draft the club constitution, recruiting members, and managing logistics.
- Researched rocket designs to begin the preliminary design process, looking into different fuel types and designs.

Willow School Robotics Team

New Orleans, LA

### Captain & Subteam Lead

Aug 2021 - May 2025

- Team captain (2024), lead programmer (2022, 2023, 2024), lead 3D modeler (2022, 2023, 2024), founding member (2021).
- Won the Louisiana Regional Championship in 2021, 2022, and 2023.
- Competed in the FIRST Robotics World Championship in 2021, 2022, and 2023.

## COMMUNITY SERVICE

### Mentoring Robotics Team

Aug. 2025 - Present

- Mentor and teach about 30 members of the Willow School Robotics team.
- Instruct newer members in CAD, programming, using various tools, and the engineering design process.
- Advise the two robotics teams on their robot design and build.

### Ochsner Hospital

Jul. 2025 - Present

- Greet patients and assist them in navigating the hospital.

### Second Harvest Food Bank

Aug. 2024 - May 2025

- Packaged and sorted food for families in need.

## SKILLS AND INTERESTS

**Technical Skills:** CAD software, 3D modeling, 3D printers, laser cutters, CNC router, and various power tools.

**Laboratory Skills:** Handling lab equipment and chemicals, lab safety, and experimental design.

**Computer Skills:** Bootstrap Studio, WordPress, HTML, CSS, Java, C++, HTML, Google Suites, and Microsoft Suites.

**Interests:** Airplanes, Fighter Jets, Space, Rockets, Robotics, 3D Printing, Biking, Baseball, Geopolitics, and Gaming.