LOUDOUN ROBOTICS

FOR STUDENTS

Real Robots. Real Tournaments. Real Friends.

# You + a robot + a championship.

*What FIRST robotics actually looks like, what you'd build, and how to find a team — or start one when your school doesn't have one yet.*

WHAT IS THIS, REALLY?

# Not a class.
# Not a club lecture.

You build a robot. You write the code that makes it move. Then you take it to a tournament on a Saturday and compete against other teams from across Loudoun and Virginia.

There's a new game every year. The kit is real. The deadline is real. The competition is real.

**You don't have to be the smart kid. Half of robotics is showing up, trying things, and fixing what breaks.**

WHAT YOU'D DO ON A TEAM

# Pick what fits you. Teams need all of it.

## Build

Design the robot, attach motors and gears, fix what breaks. Hands-on engineering.

## Code

Program how the robot moves, senses, and decides. Block-based or Java.

## Drive

Pilot the robot in matches. Reflexes, strategy, calm under pressure.

## Strategy

Read the game manual. Plan how to score. Decide what to build first.

## Outreach

Run social media. Pitch to judges. Tell the team's story.

## Project lead

Run the meeting. Track what's done. Push the team across the finish line.

*Most kids try two or three roles before settling.*

TWO WAYS IN

# Pick where you are. Grow into the next.

GRADES K–8

## FIRST LEGO League

LEGO-based. Beginner-friendly. Two divisions: Explore (K–4) is showcase-style; Challenge (4–8) is real competition.

→ *Best if you've never done robotics before*

GRADES 7–12

## FIRST Tech Challenge

Metal robots, Java code, alliance-based competition. The closest thing to a professional engineering team you can join in middle or high school.

→ *Best if you want serious engineering challenge*

*Not ready for a full season? Try a Loudoun Robotics summer camp or a community STEM event first.*

WHAT A SEASON LOOKS LIKE

# Five months. A few hours a week. One championship Saturday.

| Sep | Oct | Nov | Dec | Jan+ |
|---|---|---|---|---|
| **Open the kit** | **Build & code** | **Practice runs** | **Tournament** | **Optional regionals** |
| Game reveal. First meeting. Meet your teammates. | Prototype. Break things. Iterate. Learn fast. | Test your robot. Find what fails before tournament day. | One Saturday. Compete. Cheer. Probably win something. | If you qualify. Otherwise: rest, plan year two. |

*Total: roughly 30–60 hours including the tournament — depends on team and program. Comparable to a school sport, with a heavier push in November.*

WHAT YOU ACTUALLY GET

# Stuff colleges and companies actually look for.

1

## Real engineering

Not theoretical. You designed a thing, built it, and made it work under deadline.

2

## Code that runs in the world

GitHub-able. Portfolio-able. Something to point to in an internship or college application.

3

## FIRST's $80M+ scholarship pool

FIRST alumni qualify for awards from partner institutions every year. Some are FIRST-only.

4

## A team you'll remember

The people who show up to the championship with you. That's not a small thing.

*Real outcomes. Not promotional fluff.*

GET ON A TEAM

# Already at your school? Find it. Join it.

1

## Ask a teacher you trust

Science, math, shop, or robotics teachers usually know if there's a team — and if not, who'd start one.

2

## Check the FIRST team finder

firstinspires.org → 'Find Teams'. Filter by ZIP. See every active Loudoun team.

3

## Email us if you're stuck

We maintain a directory of Loudoun teams and can introduce you to a coach.

→ **contact@loudounrobotics.org**

*Loudoun community FTC teams we've helped fund: Circuit Breakers and Short Circuit.*

NO TEAM YET? START ONE

# Five steps. A couple of weeks of asking around.

1

## Find 2–3 friends who'd join too

Six kids asking is way stronger than one.

2

## Find a teacher willing to sponsor

Doesn't have to be a tech teacher. Anyone you trust who has time after school.

3

## Get 15 minutes with your principal

Ask a parent or teacher to set it up — bring your friends and our one-page proposal.

4

## Make the ask: an after-school club

No new class, no schedule change. Most schools have a club-approval process — we'll help you navigate it.

5

## Email us when they say yes

We help with the rest — team grant funding for startup costs, registration help, and mentor matching.

*Full playbook with email templates: loudounrobotics.org/resources.html#students*

# Build something.
# This fall.

Whether you join a team or start one — we'll help you. The hardest part is asking once.

**contact@loudounrobotics.org**

loudounrobotics.org/students.html

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