Leading 5409's Scouting/Strategy

- A Beginner's Guide

Dedicated to all past, present, and future members of the 5409 Robotics Team.

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Prologue – A Living Guide from 2024/25

Hi! I'm **Yonina Wu** — team 5409's 2024/25 season **Programmer & Strategy/Scouting Lead**. I've compiled everything I learned while balancing scouting and programming so that future scouting leads have a clear starting point. Because I prioritized wrapping up programming tasks first, much of my scouting prep was compressed into the last few weeks before competitions, so you'll notice that my timelines are tighter than ideal. Don't take this as the standard, feel free to adapt the pacing based on your own situation.

I put this document together because our 2024/25 scouting team was mostly student-led, which is awesome, but also risky. The thing about students is… we graduate. And when that happens, a lot of the "how do we actually run scouting?" knowledge disappears. So this guide exists to make sure future scouting leads aren't starting from scratch every year.

This guide is a **living document**. That means you're encouraged to update it as strategies evolve, tools improve, or new workflows emerge. Scouting is team-dependent, game-dependent, and event-dependent—so please make this guide work for *your* team, *your* year, and *your* goals.

Section I:

Scouting (for Picklist)

What is Scouting?

Goal of scouting:

In a typical FRC competition, matches are divided into two phases: **qualification matches** and **playoffs** (see General Information section for more context). During the qualification phase, alliances are randomly generated, meaning teams have no control over who they compete with or against. However, once a team qualifies for playoffs, the format shifts to **alliance selection**, where the highest-ranked teams choose their alliance partners for the elimination rounds.

This is where scouting becomes essential. The primary goal of scouting is to systematically collect and analyze information about other teams' robots—how they perform on the field, their strengths and weaknesses, and the roles they consistently play in matches. This includes tracking capabilities such as scoring efficiency, defensive effectiveness, endgame consistency, and drive team awareness.

By compiling and reviewing this data, teams are better equipped to make informed decisions during alliance selection. Scouting enables teams to identify which partners would best complement their own robot's abilities and align with their strategic approach to playoffs. In high-stakes elimination matches, the synergy between alliance partners can significantly influence performance, making accurate scouting a key contributor to overall success.

Part 1: Preparation Phase — 3 Weeks Out

Goal: Get scouting infrastructure and tools ready before your first official event. You should start this phase ~3 weeks before your first event.

Checklist & Tasks:

- **Create a ScoutingPass Website**

  For scouting, our team uses ScoutingPASS — an open-source, web-based scouting application developed by FRC Team 2451 PWNAGE. They typically release a new version each season that's game-specific, so you'll be customizing the current year's version for our team. Once scouts finish filling out the form on the ScoutingPASS website, the system automatically generates a QR code that contains all the submitted data. This QR code is later scanned by the lead scout to compile all team data (explained in detail in **Part 3**).

  To get started, you need to be part of our team GitHub organization. If you aren't already added to the `frc5409` GitHub team, contact the programming mentor. Once you've been added, head to the ScoutingPASS GitHub Repository.
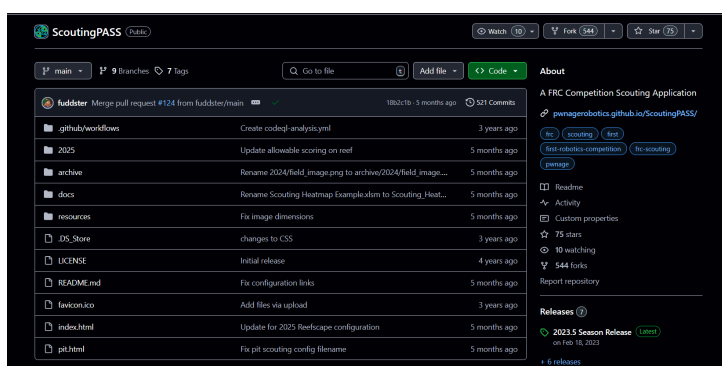
You should now see the original repo. Then, click the **Fork** button at the top right of the page.
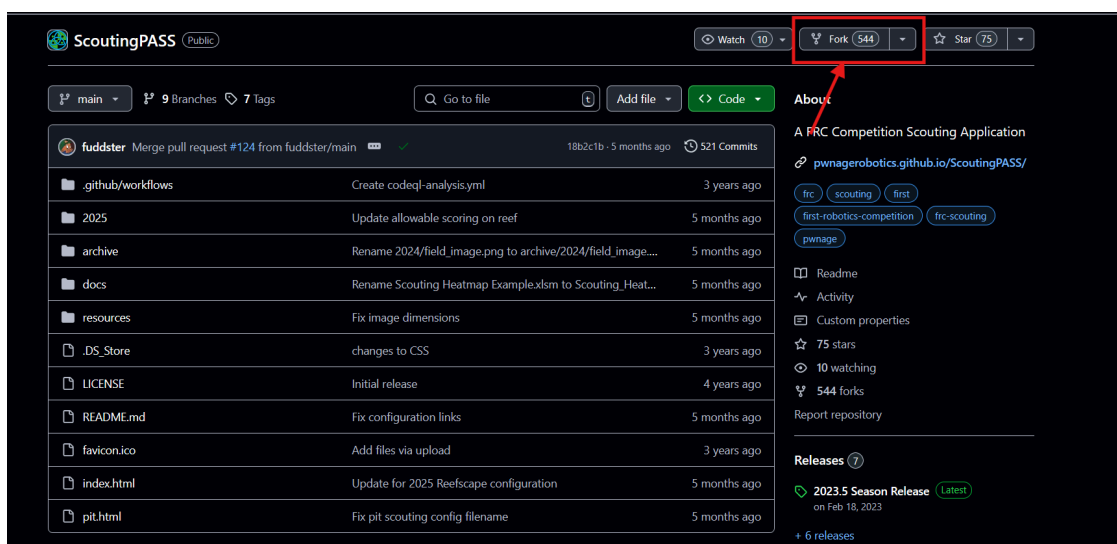
When prompted, select `frc5409/ScoutingPASS` as the destination. This is the version we've used in previous years. We maintain this fork so that we can build on top of it with team-specific features.

GitHub will now create a new copy of ScoutingPASS under the `frc5409` organization that you can edit freely.

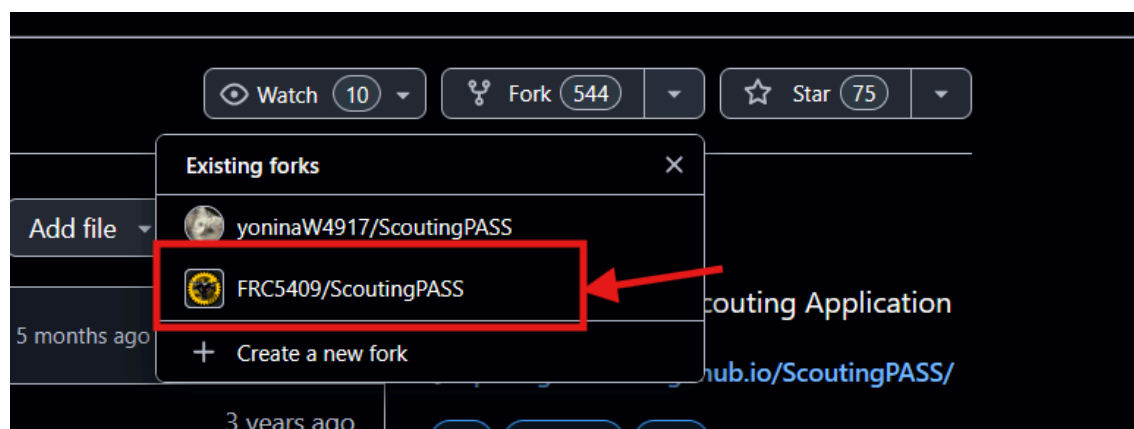You'll be working on the fork you just created. Your job is to **customize it for our team and the current game.** You'll mainly be editing the `.js` file (JavaScript) that controls how the website looks, what questions scouts answer, and how that data is structured. You might also modify some styling or form behavior depending on how this year's game runs. If you're unfamiliar with GitHub or editing JavaScript files, ask one of the programming team members for help. ScoutingPASS is customizable, but it does take some getting used to if you haven't worked with code before.

Here are a few things that you might use when you edit the `.js` file:

The basic fields are:

- Scouter - who is scouting this robot
- Event - the event that is being scouted
- Level - The level of competition (Qualifications, Double Elimination, Finals, etc)
- Match - the match number that is being scouted
- Robot - Which robot is being scouted (Red-1, Blue-1, etc.)
- Team # - What team is being scouted

User defined fields can be of several different types:

- Text - A free form text field
- Number - Like text, but restricted to numbers
- Counter - A counter that can be increased or decreased with a click or touch
- Radio Buttons - A single choice between several options (Ball pick up: ()Ground ()Loading Bay ()Both ()None)

- Checkbox - A single on/off or yes/no check box (Exit Start Line? []Yes if checked)
- Timer - A time counter to count the number of seconds it takes to do something (How long did it take to climb?)
- Cycle Timer - Start the timer and with 1 click track cycle times of robots.
- Field Image - Using an image of the field, select positions on the field. (Use to record starting point or shooting locations)

The ScoutingPASS website is hosted using **GitHub Pages** at the domain: `FRC5409.github.io/ScoutingPASS/`. Once you've made your edits for the new season, all you need to do is update the hosted branch to point to the new branch you created. This will publish your customized version of the site.

To finalize this step, reach out to the **programming mentor** — they'll help switch the branch and make sure everything is working properly.

- **Make a Scouting Schedule**

  Here are examples from the 2025 season: 📗 2025 Scouting Schedule

  There are a few things you need to do when you make the Scouting Schedule:

  1. One of your main responsibilities as scouting lead is to build a scouting schedule that works around other subteam commitments and ensures full match coverage. To start, gather the **pit schedules** from the manufacturing and design leads. These will show you when team

members are assigned to be in the pits—anyone scheduled there should not be placed on a scouting shift during that time.

2. Once you have a clear idea of everyone's pit obligations, begin forming scouting groups. Each group should consist of **three people**, and you'll need to designate **one group leader** per group:

This person should be an experienced scout who is responsible for making sure their teammates are prepared before their shift starts and for collecting and

GROUP 1		
Leah	Atia	Ava
GROUP 2		
Mady/Boaz	Aadi	Robbie
GROUP 3		
Emily	Ari	Ariel
GROUP 4		
Jessica/ Leah	Abhinav	David
GROUP 5		

emailing the QR codes from their group to you after the shift ends. It's important that you choose group leaders who are reliable and responsive.

3. Each scouting shift requires **two groups of three**—one group to scout the red alliance and one for the blue alliance. That means each person is responsible for tracking one robot per match during their shift.

4. The most effective way we've found to divide shifts is by **match number**, with each shift covering **five matches**. We've tested other methods (such as time-based shifts), but they've proven less reliable—see Part 4 for more on that. You'll need to estimate how long each set of five matches takes and build the schedule accordingly, doing your best to avoid overlap with pit assignments. Pit work takes priority over scouting, and

it's the strategy leadership team's responsibility to coordinate substitutions when conflicts come up.

5. During the 2024/25 season, we kept a pool of **six backup scouters** to fill in when conflicts occurred. Maintaining a few trained backups is highly recommended—they make handling last-minute changes much easier.

***Super scouters:** During the 2025 season, we introduced a role called Super Scouters. These were team members assigned to closely watch specific robots that we were considering for alliance selection but weren't completely sure about. Their job was to observe these teams in detail during matches, take qualitative notes on performance, consistency, and strategy, and then report back to the strategy team. This debrief usually happened before alliance selection on Day 2 and helped us make more informed decisions about

SUPER SCOUTERS	
Teams #	SCOUTER
	Arav
	Mady
	Faris
	Anshika
	Boaz
	Jason
	David
	Jessica

where these borderline teams should be placed on our final picklist. This role proved extremely valuable and is worth continuing in future seasons. Their job will be explained in more detail in Part 3.

● **Build a Data Collection Form**

Here are examples from the 2025 season DCMP: 📗 provincials scouting data

On the ScoutingPASS website, data is collected across five main pages:

Basic, **Auto**, **Teleop**, **Endgame**, and **Miscellaneous**.

Each page contains a different number of fields (or data entries), and the exact fields vary year to year depending on the game.

Here's the tricky part: once the QR code is scanned and the data is exported into an Excel sheet, all the values from all five pages are stored in a single, continuous row — not grouped by page. That means you need to know the exact order in which fields were programmed on the website to interpret the Excel data correctly.

Let's use the 2025 season's Teleop page as an example. Below, you'll see a side-by-side comparison of the Teleop form on the ScoutingPASS site and the corresponding columns in the exported Excel sheet:

The order of data fields in the Excel export **matches the order in which they appear on the ScoutingPASS website** — starting from top to bottom, left to right across each page. For example, in the 2025 Teleop section (see image above), the columns in the Excel sheet directly correspond to the fields listed on the Teleop form:

Coral L1, Coral L2, Coral L3, Coral L4, Coral Missed, Processor Score, Net Score, Algae Missed, Pickup From, and Removed Algae From Reef — in that exact order.

Because this mapping is based on field order, **you should always do a test run** after setting up your ScoutingPASS fork. Enter clearly different values into each field (e.g., 1, 2, 3...) so that when the QR data is scanned into Excel, you can easily confirm whether everything is aligned correctly. This saves you a lot of confusion during competition and ensures your scouting data is actually usable.

If you notice something doesn't match, it's usually because a field was added, removed, or shifted in the code — double-check the field order in the `.js` file to fix it.

Part 2: Education Phase — 1 Week Out

Goal: Train your new and returning scouts on the current year's process.

Training Steps:

The week before your first event is when you run Scouting Training for the full team. You'll need to **coordinate with Mr. Douglas** ahead of time to book a team-wide meeting. During this session, your goal is to explain how our scouting system works, why it matters, and how to properly submit data. This session sets the foundation for your entire season, so make sure it's clear, engaging, and well-organized.

For all team members:

- **Explain the Why Behind Scouting**

  Start the meeting by helping everyone understand **why we scout in the first place**. Cover:

  - What scouting data is used for (e.g., match strategy, alliance selection, and team rankings)
  - How strategy and drive teams rely on accurate data to make real-time decisions during events
  - How poor or inconsistent data impacts both performance and alliance selection

  Make it clear that even if a scout isn't on the field or in the pits, they are still contributing directly to our match wins and overall event success.

- **Demo the Scouting Website**

  Next, walk the team through the **ScoutingPASS website** they'll be using at competitions. Use screenshots or a live walkthrough to show:

  - What each page (Basic, Auto, Teleop, Endgame, Misc) looks like
  - What type of data they'll be collecting
  - How to use the plus/minus buttons, dropdowns, and checkboxes
  - How the site generates a QR code once a match is completed

  Make sure every team member has tested the site on their phone ahead of time and understands how to navigate through it smoothly.

Instructions for Group Leaders

  Brief your **scouting group leaders** separately or during this meeting. Their responsibilities include:

  - Making sure their group members are present and ready to scout before their shift starts
  - Reminding their group to fill out and submit scouting data properly
  - Collecting and sending all QR codes from their group to the scouting lead (you) after every shift

  Each group leader is expected to send in:

  - **15 QR code images per shift** (3 robots × 5 matches)

- These images should be emailed or messaged, depending on what the data entry team prefers that year

Remind group leaders that timely and complete QR submission is essential for keeping data up to date and usable during the event.

⚠️ Important Note About Data Integrity

Before you wrap up training, clearly emphasize this point to **everyone** on the team:

*If you miss a match or can't get accurate data, **leave it blank**. We would much rather have a small gap in the data than include an entry that doesn't reflect what actually happened. When we analyze performance and average out metrics, even a single inaccurate data point can distort results more than one missing entry.*

*Scouting is about **accuracy**, not just completion. Clean data strengthens our strategy. Inaccurate data can lead to poor decisions in critical moments.*

That said, it's also important to remember that **mistakes will happen**. We're all human, and competitions are fast-paced and chaotic. If something goes wrong, don't stress — just do your best, and be honest if something didn't get recorded. The goal is to build a culture where we value both **precision** and **kindness**, and where every scout feels supported and trusted to contribute.

Part 3: Event Execution

Before the Event:

- **Run a Leadership Team Briefing**

  Hold a quick meeting with your leadership team. This isn't a full team meeting — it's meant to align the people who will be managing the system during the event.

  During the briefing, make sure to:

  - Assign responsibility for reminding the scouting group leads before each shift — someone needs to be designated to check the schedule and ensure each shift group is in place on time.
  - Confirm who is collecting and scanning the QR codes from the group leads after each shift, and how they'll be organizing/storing the data.
  - Clarify who is filling out the drive team strategy sheets during matches, and ensure they're familiar with what information needs to be collected (see Section II: Drive Team Strategy).
  - Review backup plans in case someone can't perform their assigned role mid-event.

- **Test All Websites and Devices**

  Before the event officially begins, make sure every scout's device is ready to go. This step is **non-negotiable** — the venue will not have Wi-Fi, and **hotspots are not allowed during matches**, especially in the stands.

  Here's what you need to check:

- On the bus, make sure everyone can open the ScoutingPASS website on their phone before arriving at the venue.
- Instruct team members without data to load the scouting website in their browser before the first match of the day.
- Once loaded, the website will work offline as long as the tab remains open — just don't refresh it.
  If anyone without data accidentally closes or refreshes their tab mid-shift, they'll lose access unless they have data, so assign backups if needed.

Doing this in advance avoids last-minute issues and ensures all scouts are ready to collect data from Match 1 onward.

During the Event:

Once the matches begin, your job shifts from preparation to **real-time coordination**. Your main responsibilities are keeping the scouting process on track, ensuring data is flowing in consistently, and resolving issues as they arise.

- **Remind Group Leads Before Each Shift**

Designate a scouting leadership member (usually you or someone from your leadership group) to **remind the next shift's group leads** one match in advance. Group leads are responsible for making sure their scouts are present, ready, and in the stands before the match they're assigned to. It's best to remind them around one match ahead so the transition between shifts is smooth and no matches are missed.

- **Ensure Data is Submitted Promptly**

  After each shift, group leads must send in all 15 QR codes (3 robots × 5 matches). They should submit these either via email or messaging platform, depending on the system agreed upon during the pre-event briefing. Make it clear that this needs to happen immediately after the shift ends, not later in the day — delays can lead to disorganization, missing data, and headaches for the scanning team.

- **Scan Data Every 2–3 Shifts**

  Whoever is in charge of scanning QR codes should aim to **log the data every 2–3 shifts**. If you let too many QR codes pile up, the process becomes overwhelming and you risk errors during data entry. Keeping up with scanning throughout the day also gives you time to spot any issues early — like missing codes, incorrect match numbers, or weird outliers that might signal scouting mistakes.

After the Event:

  The time between events is your chance to reflect and refine. Don't skip this phase — it's how the scouting process improves over the course of the season.

- **Hold a Debrief with Leadership team**

  After each event, organize a debrief with your scouting leadership team. Discuss:

- What went well (e.g., smooth shift transitions, accurate data, reliable scouts)
- What didn't go well (e.g., tech issues, missing QR codes, confusing form questions)
- What needs to change before the next event (e.g., shift assignments, training, scout group restructuring)

This is also the time to review any feedback from the drive team, strategy team, or scouts themselves.

- **Update ScoutingPASS**

  Based on your debrief, make any necessary changes to the **ScoutingPASS layout**. This could include:

  - Adding or removing fields that weren't useful or were missing
  - Clarifying question wording that caused confusion
  - Reordering fields to better match the flow of a match

  These updates help ensure your scouts are collecting the most relevant and accurate data for your team's needs.

- **Update the ScoutingPass Event Code**

  Before each new event, you must update the **event code** in your ScoutingPASS setup so the website pulls the correct match schedule and team list from **The Blue Alliance (TBA)**.

If you skip this, the team list will be wrong and the form will auto-fill invalid team numbers — which completely breaks the scouting process.

The event code is indicated by the TBA page of the event:

You can then change it in the .js file of ScoutingPASS:

Double-check that the new event code is working properly by loading the form and confirming the listed teams match the TBA schedule for that event.

⚠️ **If you make changes to the scouting process, be sure to re-train or update the team (see Part 2).**

Part 4: Picklist Generation — Turning Data into Strategy

All of the scouting work from the event — the shift schedules, QR code collection, data entry, and team notes — builds up to this moment: **picklist generation**. This typically happens **after the last match on Day 1** of the competition, once we've collected enough match data to evaluate potential alliance partners.

- **Who's Involved**

   The picklist meeting is led by Mr. Chambers, our design and strategy mentor, and includes the scouting leadership team, drive team, and any interested team members who want to contribute to strategy decisions. It's open to anyone who has something meaningful to add — especially if they've been closely involved in scouting or match analysis.

- **The Purpose**

   During alliance selection, the top 8 teams form alliances of three robots each. That means **24 teams will be picked** overall. Our goal is to create a ranked list of 24 teams based on our strategy priorities, so that if we are in a picking position (or preparing to be picked), we know exactly who we want and why.

Day 1: Building the list

- **How We Build the List**

   The meeting starts with a discussion of alliance goals. We ask ourselves:

- What kind of robot do we want as a **first pick**?
- What kind of robot works best as a **second pick**?
- Sometimes we consider specific archetypes such as cycle bots, defense bots, endgame climbers, or more balanced bots.

Once we establish the criteria, we begin reviewing team data — using both quantitative data from scouting and qualitative insights. We compare robots' consistency, compatibility with our playstyle, and performance trends throughout the day.

Our priority list from the 2025 season:

Goals	
High priority:	General:
Auto L4	Cycle time
L4, L3, L2	
Algae scoring	
Medium priority:	
Algae scoring	
climb	
Low priority:	
defence	

Some key considerations might include:

- Autonomous scoring reliability
- Teleop scoring volume and accuracy
- Endgame capabilities (climb, park, trap, etc.)

- Defensive potential or ability to play support
- Driver control and field awareness

We go through the data **team by team**, sometimes referencing match videos for clarification, and **debate rankings** as a group until we agree on a finalized list.

- **Handling Controversial Teams — Super Scouting on Day 2**

  Sometimes, there are teams on the edge of our picklist that spark disagreement — maybe their performance was inconsistent, or their data looks good but doesn't match what we saw on the field. For these **"controversial teams"**, we assign **Super Scouters** (see *Part 1 > Making a Scouting Schedule*) to **observe them closely during Day 2 qualification matches**.

  These Super Scouters are given specific questions to investigate — for example:

  - Can they actually climb reliably?
  - Are they consistent with game piece placement?
  - Are their driver issues resolved?

  They focus only on these assigned teams during matches and take detailed notes to help resolve any uncertainties.

Day 2: The Big Day – Alliance Selection

Alliance selection happens **immediately after the final qualification match**, and the decisions made here can define the entire event outcome — whether you're a picking

team or hoping to be picked. Because of the time pressure, it's essential to be fully prepared *before* the final whistle blows.

- **Final Picklist Review Meeting**

  During the **last few matches of Day 2**, you'll need to host a final strategy meeting with the scouting leadership team and Super Scouters (and hopefully Mr. Chambers). Do not wait until all matches are finished — you won't have time.

  In this meeting:

  - Super Scouters report on the teams they've been observing
  - The group discusses where controversial or borderline teams should land on the final picklist
  - Any necessary reorderings or removals are made to ensure the list reflects up-to-date performance

  Hosting this meeting early gives you buffer time to finalize rankings, print or share the picklist, and brief the drive team before alliance selection begins.

- **Pit Interviews for Last-Minute Concerns**

  Sometimes, new issues emerge in the final qualification matches — for example:

  - A robot breaks down
  - A team suddenly switches playstyle or strategy
  - There's inconsistency that wasn't previously noticed

If open questions remain after the final Super Scouter review, send off-duty Super Scouters to the pits to speak with those teams directly. Ask questions like:

- "What broke in your last match?"
- "Will you be repaired and playoff-ready?"
- "Will you still play the same role in the playoffs?"

These short, direct interviews give you real-time insight that pure match data can't provide — especially when deciding whether to take a risk on a team that's mechanically uncertain.

Part 4: What We Tried — And Don't Recommend

As scouting lead, you'll probably hear suggestions to try new formats or systems — which is great. But here are a couple of things we've already tried in recent seasons that didn't work out well for our team. Save yourself the trouble and consider skipping these unless you have a really strong reason (and a plan to fix the problems we ran into).

❌ 1. Pre-Scouting Other Events

Tried in: 2024 Season

At first, this seemed like a smart idea — watching other teams at early events to gather data ahead of time. But in reality, it didn't help us at all.

The main issue: **robots change and improve between events**. By the time we played with or against a team, their performance had shifted enough that our pre-scouted data was outdated or irrelevant.
In the end, we didn't use any of it for our picklist — we relied only on the fresh data collected during our own event.

Conclusion: Pre-scouting took a lot of time and gave us nothing useful in return. Focus your energy on accurate scouting during the events we actually attend.

❌ 2. Time-Based Scouting Schedules

Tried in: 2024 Season + First Event of 2025 Season

We experimented with scheduling scouting shifts based on **time blocks** instead of **match numbers**. This led to more confusion than convenience.

The issue is that FRC event schedules are unpredictable. There are frequent **delays**, **field resets**, and **schedule changes** — especially around lunch. With a time-based schedule, we ran into scenarios where **no one was scheduled to scout** because their shift was during a lunch break or downtime. But when matches resumed unexpectedly, we had **gaps in coverage**.

Conclusion: Match-number-based shifts are more consistent and predictable. Time-based shifts don't adapt well to delays or schedule changes.

Section II:

Drive Team Strategy

Drive Team Match Strategy System (2025 Edition)

Each year, our drive team coach, Mr. Carby, designs a system to help log the performance of robots we compete with and against. The goal of this system is to better utilize scouting data—especially the data collected for our picklist—to provide accurate, up-to-date insights to the drive team. This allows them to make informed strategic decisions when working with alliance partners before each match.

This system was first implemented during the 2025 season and is still in its early stages of development. This section will outline how we used the system during 2025 and offer ideas on how it can be improved or expanded for future seasons.

## Notation in 2025:

For each match we played in, we recorded the match number and the team numbers of the five other robots involved: our two alliance partners and the three opposing robots. Here's an example from the Newmarket Event:

		Newmarket Event			
Match #	Partner 1	Partner 2	Opp 1	Opp 2	Opp 3
12	4 —— 15 5409 (4)				

In this example, Match #12 includes our two alliance partners and the three robots on the opposing alliance. While our own team is shown here for demonstration purposes, we don't actually need to record information about our own robot—this example is just to illustrate how the notation should look. Recording these team numbers allows us to cross-reference with our scouting database and provide the drive team with real-time performance insights on all other robots in the match.

We follow a **standardized shorthand notation** to quickly summarize key information about each robot.
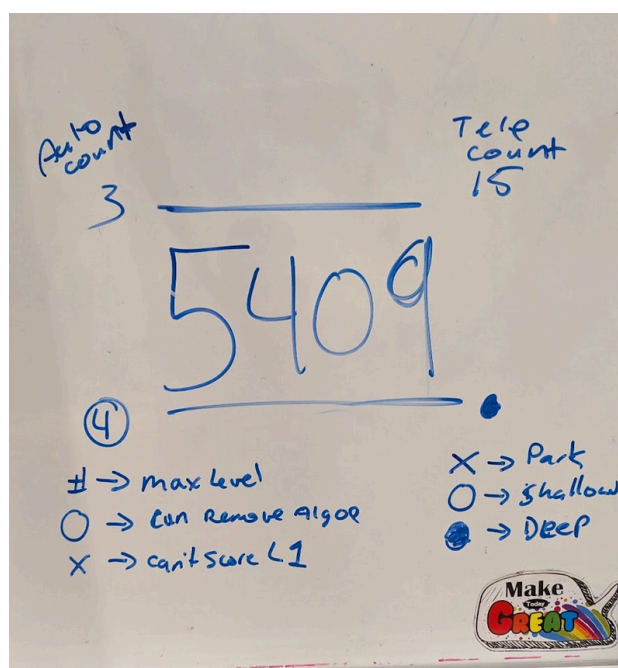
The team number is written in the center, with the number of game pieces scored during auto and teleop phases placed above (e.g., "3" in auto and "15" in teleop for this example). Around the team number, we add symbolic markers based on performance traits. These are some of the **symbols we used to indicate performance traits during the 2025 season**. This shorthand was written on strategy boards to quickly show robot capabilities, including scoring level, endgame behavior, and specific functions like removing game pieces. While the exact symbols may change year to year, the goal is to help the drive team interpret a robot's role at a glance and make fast, informed strategy decisions.

Workflow in 2025:

In 2025, our strategy sheet looked like this:

DCMP					
Match #	Partner 1	Partner 2	Opp 1	Opp 2	Opp 3

At each of our regional events, we played around **12 qualification matches**. Since each sheet could only accommodate 3 matches, we typically needed about 4 sheets to fully log all qualifications (but make sure to print extras). Each sheet was labeled by event (e.g., DCMP, Newmarket) and used to record the match number, our two alliance partners, and the three opponent teams for each match.

This system helped us stay organized and made it easier to quickly locate information during pre-match planning. To ensure the drive team had enough buffer time to prepare strategies before each match, we pre-filled as much of this sheet as possible ahead of

time using the event match schedule. This reduced last-minute scrambling and allowed the drive team to focus on discussing tactics with our alliance partners.

Here's an example from Newmarket that shows how we used this workflow in action:

▶	Quals 3
▶	Quals 6
▶	Quals 13
▶	Quals 19
▶	Quals 24
▶	Quals 28
▶	Quals 34
▶	Quals 38
▶	Quals 42
▶	Quals 45
▶	Quals 49
▶	Quals 56

Here's a list of the qualification matches we played at the Newmarket event. Based on the Scouting Schedule (see Part 1 > *Making a Scouting Schedule* if you need a refresher), we know that Shift 1 ends after Match 5 (i.e., matches 1–5 are handled by the first shift).

To give the data scanners and scouting group leaders enough time to submit their data, we plan our strategy sheet timeline accordingly. For example, **the first data entry** on the strategy sheet should be Qualification 13, since there wouldn't be enough time to reliably gather and compile data for matches earlier than that (e.g., Quals 3, 6).

This means the first strategy sheet we prepare for the drive team should include Quals 13, 19, and 24. You should try to have all the necessary scouting data for these three matches ready **at least 3 matches before the first match listed on the sheet**. So in this case, you should aim to have everything completed and handed off by around Qual 9 or 10.

This buffer gives the drive team enough time to review the information and prepare match strategies with our alliance partners—without being rushed.

Where the Data Comes From:

The data we use for these sheets comes from the **Data Collection Form** (see Part 1 > *Build a Data Collection Form*). In that section, you'll learn how to build a **pivot table** that compiles and averages each robot's performance data across matches.

Once you have that data, you'll use the notation format discussed earlier to fill out the sheets for the drive team. This ensures consistency and makes the sheets quick and easy to reference during fast-paced match prep.

Managing Human Resources:

During the 2025 season, our system relied on a two-person team to manage strategy sheet logistics. One person was responsible for **scanning the scouting data**, while the other focused on **compiling that data onto the strategy sheet** for the drive team.

The person handling scanning also took on the task of delivering the completed sheets to Mr. Carby in the pits. This meant they had to move quickly between data entry and physical delivery, ensuring the drive team always had up-to-date information before each match.

Final Notes – To the Next Scouting Lead

If you're reading this, you've probably taken on a role that lives behind the scenes but impacts everything on the field. Whether you're leading scouting for your local rookie team or refining systems for a seasoned program, you've stepped into something important — something that shapes strategy, empowers teammates, and, ultimately, helps alliances succeed.

Scouting isn't just about collecting data. It's about translating chaos into clarity, and helping your team see patterns before they appear on the field. It's about building a system others can trust when the stakes are high. And it's about teaching new scouters that what they're doing matters — even if it's from the stands.

I hope this guide has helped you feel more prepared and less alone in figuring things out. But more than that, I hope you feel empowered to change it. Some of the best things we did in 2025 came from people questioning what we had done the year before.

So improve it. Tweak it. Replace parts entirely. And when your season is done, leave your version of this guide better than you found it. Because someone else will be here next year, asking the same questions you started with.

Good luck, and may your data always be clean.

Yonina Qinyao Wu

Scouting/Strategy Lead 2024–25

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