KNOW YOUR OPPONENT

APRIL 27-30
St. Louis, Missouri

CHAMPIONSHIP

FOR INSPIRATION & RECOGNITION OF SCIENCE & TECHNOLOGY
Learn scouting strategies and how to use Tableau for improved decision-making.
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- FIRST for 6 years
- Team Advisor & Strategy lead
- Senior at Bloomfield Hills High School

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- Coach of Team 2834
- Manager at FCA
What is scouting and why is it important?
How do I create effective scouting visualizations?
How can I apply these visualizations meaningfully?
How can I get started?
What is scouting?

➔ “If you know neither the enemy nor yourself, you will succumb in every battle.

➔ If you know yourself but not the enemy, for every victory gained you will also suffer a defeat.

➔ If you know the enemy and know yourself, you need not fear the result of a hundred battles. “

- Sun Tzu, The Art of War
Scouting Workflow

Planning | Collection
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Build Season | Competition

Analysis | Strategy & Negotiation
Planning

Knowing yourself...
➔ Read the rules
➔ Strategize for multiple situations

Knowing your opponent...
➔ Scout only what is useful
  ◆ How detailed should data be?
→ Plenty of available scouting apps
  ◆ Android/iOS
    ● Team 2729, 2338, FRC Tools
  ◆ Tablet-Free
    ● Try 180’s PDF to log data
→ Other options
  ◆ Scouting Database
Analysis

➔ Creating effective visualizations
  ◆ User-friendly, interactive
➔ Developing strategies
  ◆ How to visualize scores?
➔ Figure out opponent’s strategy
  ◆ How to visualize breaching?
➔ Real-Time data collection & Analysis
Strategize with alliance members
- Compromise on different strategies
- Back your findings with analysis

The data speaks for itself
- Trust your team’s observations
- Reliability is better than risk
Live Tableau
Creating effective visualizations
Single Match Strategy

➔ Match predictions
➔ Autonomous
➔ Ranking points
◆ Defense breaching roles
◆ Winning strategy - Defense or Shooting?
◆ Capture?
Alliance Selection Strategy

➔ Predict qualification outcomes
➔ Create preliminary lists
  ◆ Best auto, shooter, climber, etc.
➔ Create final pick list
  ◆ Tailor list based on desired traits
➔ Adjust list during alliance selection
How to get started

➔ Plan your team’s strategies and decide what to collect
➔ Decide how to collect data
➔ Download Tableau Desktop
  ◆ Each team gets 5 copies in the team summary dashboard on FIRSTinspires
  ◆ Training Videos
➔ Check out our sample visualizations
Review

➔ Knowing your opponent is just as important as knowing yourself
➔ Aim for concise, effective visualizations
➔ Be the leader of your match
➔ Trust your data
Links & Resources

Presentation Link:
bit.ly/26vtxUD

➔ team2834.com/resources
➔ tableau.com/first-robotics
➔ Team 2834 Scouting Database
➔ Team 180 No-Tablet Scouting PDF
➔ App Suggestion Thread
Thanks for listening!

➔ Questions?
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