STUDENT ROBOTICS 2021

VIRTUAL KICKSTART

KICKSTART 2021

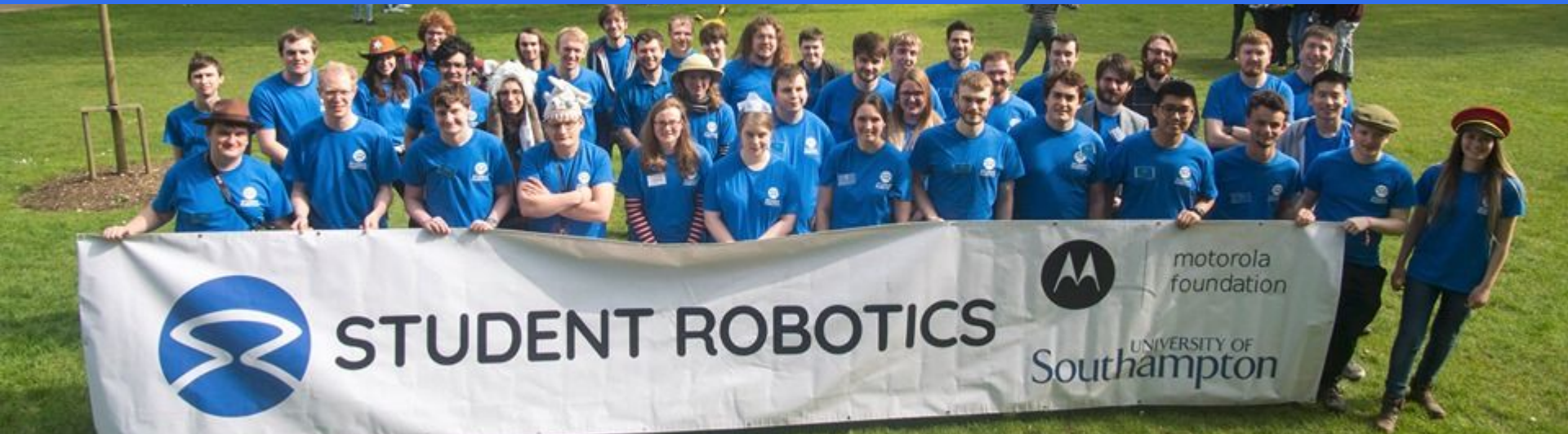
1. What is Student Robotics
2. Schedule for the year
3. The simulator
4. Creating your robot
5. The game
6. The rest of today

WHAT IS STUDENT ROBOTICS?

The Volunteers

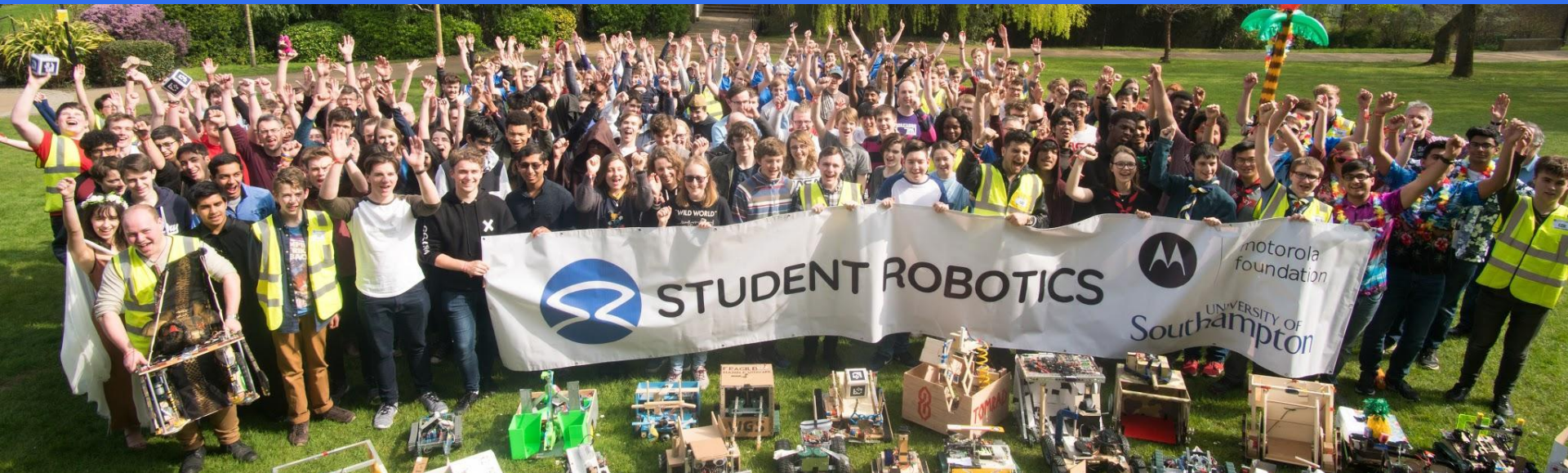
We may be nerds, but we aren’t scary!

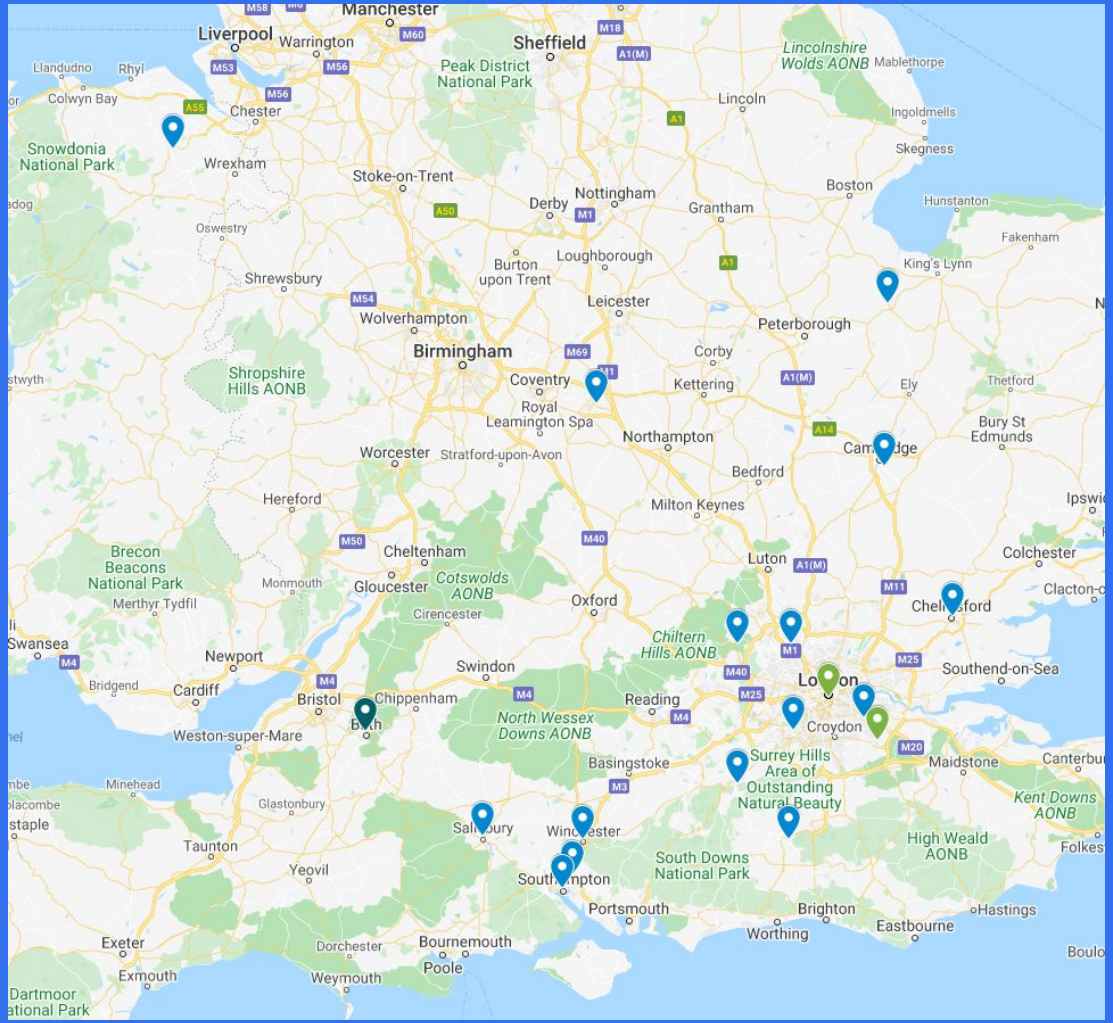
We’re here to help!



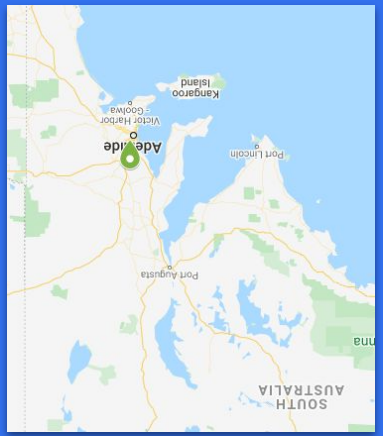
The Teams

There's *n* of you!
(not all in this room)



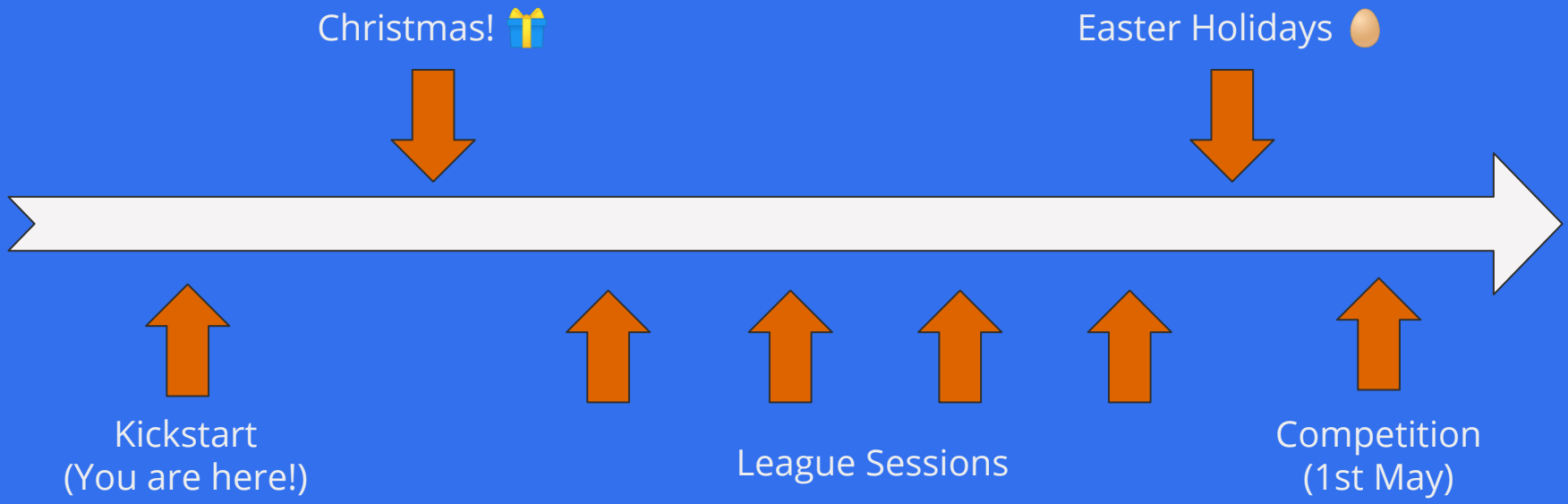

Manchester
Liverpool
Warrington
Sheffield
Peak District National Park
Lincolnshire Wolds AONB
Chester
Lincoln
Snowdonia National Park
Wrexham
Stoke-on-Trent
Nottingham
Derby
Grantham
Boston
Skegness
Hunstanton
Oswestry
Shrewsbury
Burton upon Trent
Loughborough
Leicester
King's Lynn
Fakenham
Wolverhampton
Peterborough
Birmingham
Corby
Shropshire Hills AONB
Coventry
Kettering
Ely
Thetford
Royal Leamington Spa
Northampton
Bury St Edmunds
Worcester
Stratford-upon-Avon
Bedford
Hereford
Milton Keynes
Ipswich
Brecon Beacons National Park
Cheltenham
Luton
Colchester
Monmouth
Gloucester
Cotswolds AONB
Merthyr Tydfil
Cirencester
Oxford
Chelmsford
Swansea
Chiltern Hills AONB
Newport
Swindon
Southend-on-Sea
Cardiff
Bridgend
Bristol
Chippenham
Reading
Croydon
North Wessex Downs AONB
Weston-super-Mare
Basingstoke
Surrey Hills Area of Outstanding Natural Beauty
Maidstone
Canterbury
Minehead
Glastonbury
Kent Downs AONB
Salisbury
Winchester
High Weald AONB
Taunton
Yeovil
Southampton
South Downs National Park
Portsmouth
Brighton
Hastings
Eastbourne
Worthing
Exeter
Dorchester
Bournemouth
Poole
Exmouth
Weymouth
Dartmoor National Park


Landshut
Augsburg
Freising
Erding
Dachau
Garching
Munich
Landsberg am Lech
Starnberg
Rosenheim


Adelaide
Kangaroo Island
Victor Harbor
Goolwa
Port Lincoln
Port Augusta
SOUTH AUSTRALIA


Rouen
A13
A16
Paris
Versailles
A4
A10
A5
A6

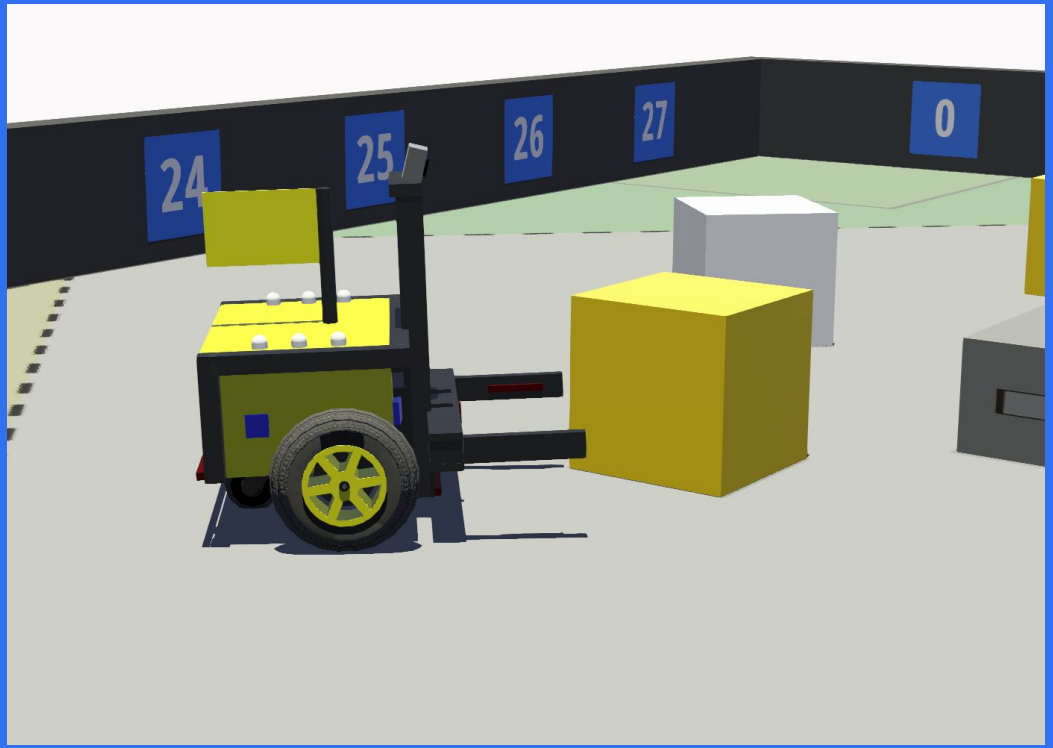
Schedule for the year



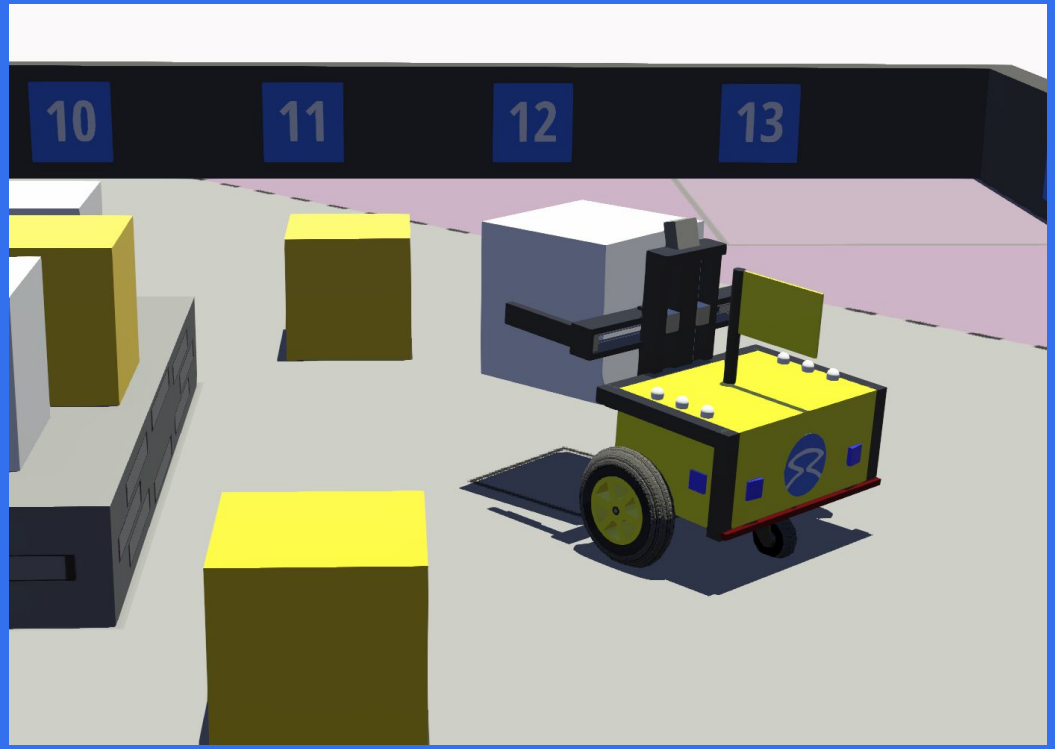
6 MONTHS

You have **ONLY** 6 months to...

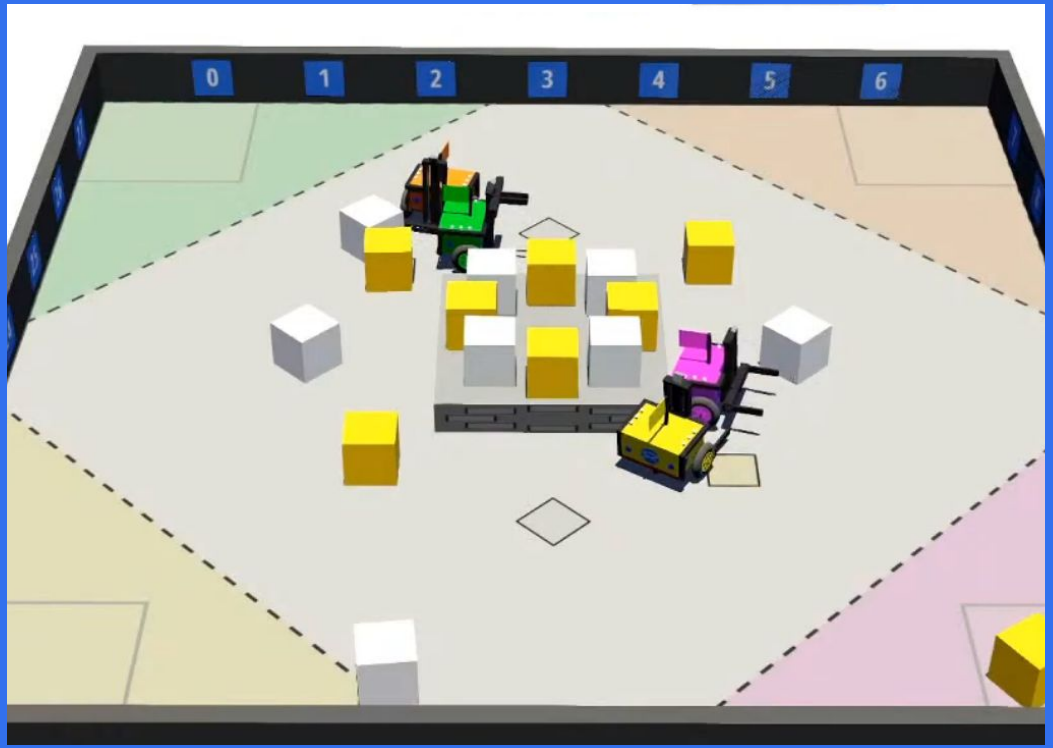
Get your robot moving



Do some things

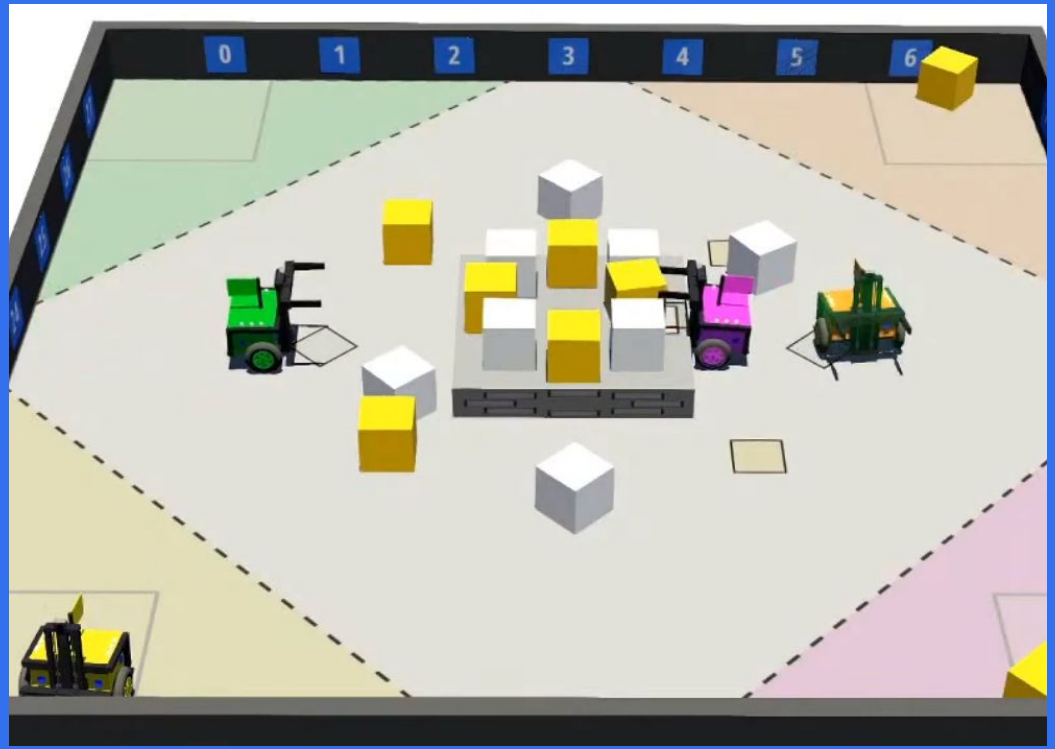


Meet some robots



Compete,

Compete more,

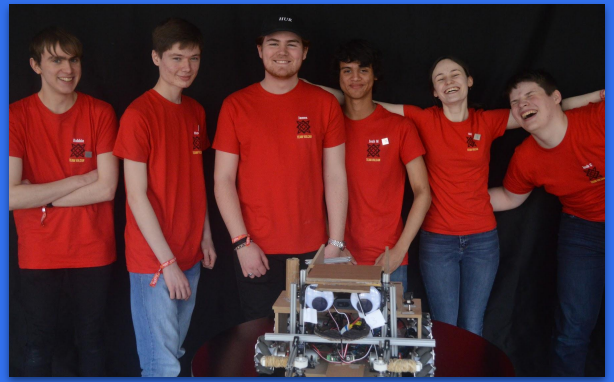


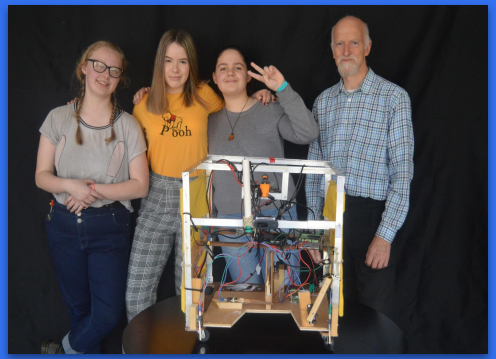
Compete more*er*

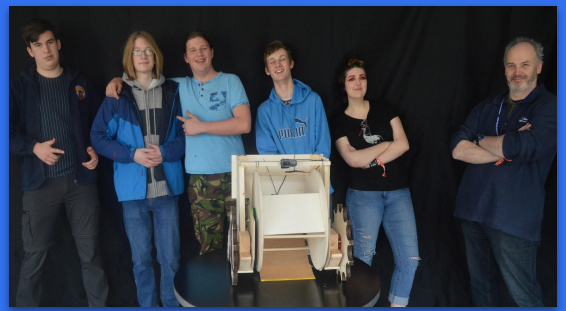
Score some points

Win some prizes

Have fun!



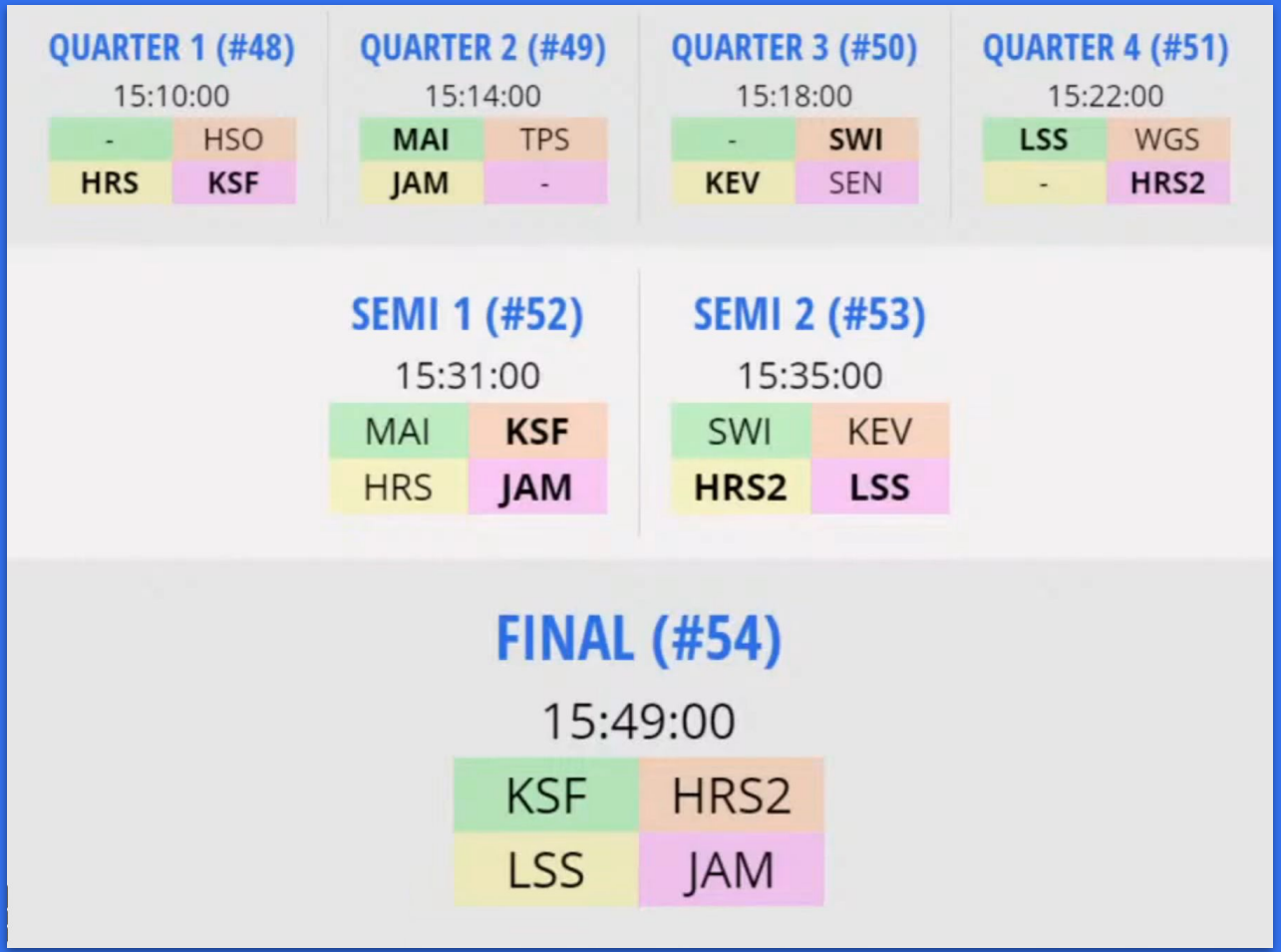




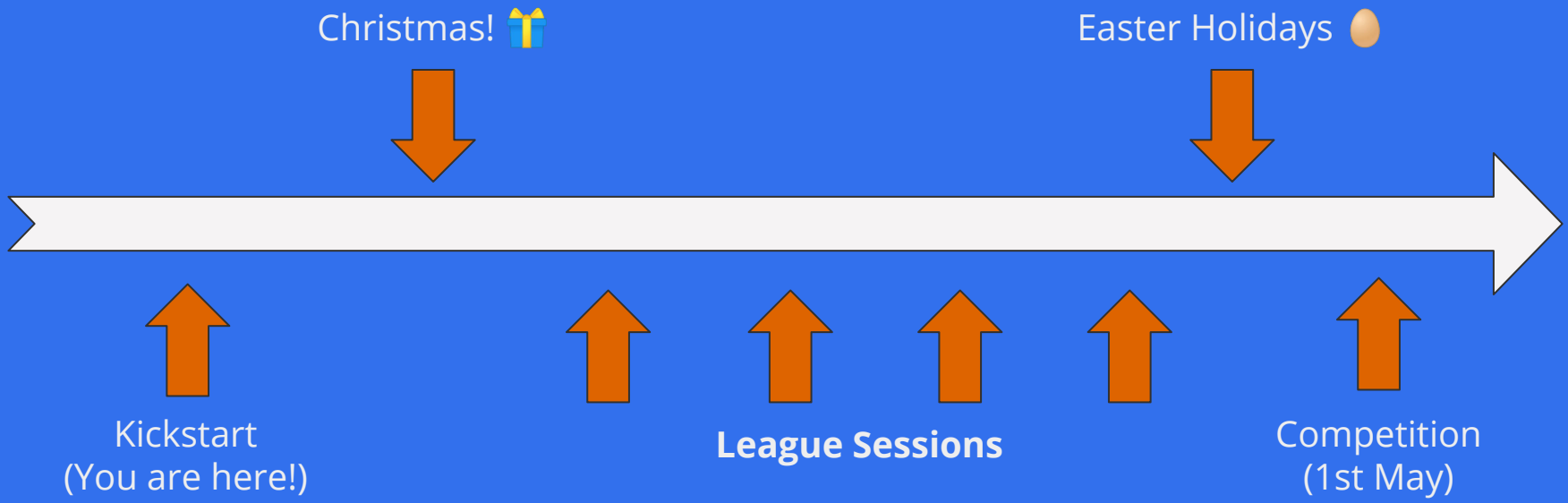
The League

Position ▲	League Points	Game Points	Team ◊
1	111	90	KSF: Kenilworth Sixth Form
2	103	72	LSS: Lawrence Sheriff School
3	98	60	JAM: JAMDynamics
4	93	53	SWI: South Wilts Grammar School
5	90	46	HRS: Hills Road Sixth Form College (first team)
6	88	37	HRS2: Hills Road Sixth Form College (second team)
7	82	44	MAI: Gymnasium Markt Indersdorf
8	75	36	KEV: King Edward VI School
9	70	16	HSO: Headington School
10	57	27	WGS: Wisbech Grammar School
11	51	5	TPS: Perse School
12	0	9	SEN: Southend High School for Boys

The Knockouts



League Sessions



League Sessions

Kickstart	21st November 2020
League Session 1	16th January 2021
League Session 2	6th February 2021
League Session 3	20th March 2021
League Session 4	24th April 2021
Competition	**1st May 2021**

Recommended Steps

1. Think about
    - Game strategy
    - Sensors
2. Iterate
    - Small improvements
    - Keep it working
3. Testing, lots and lots of testing

General Tips

Need some help?

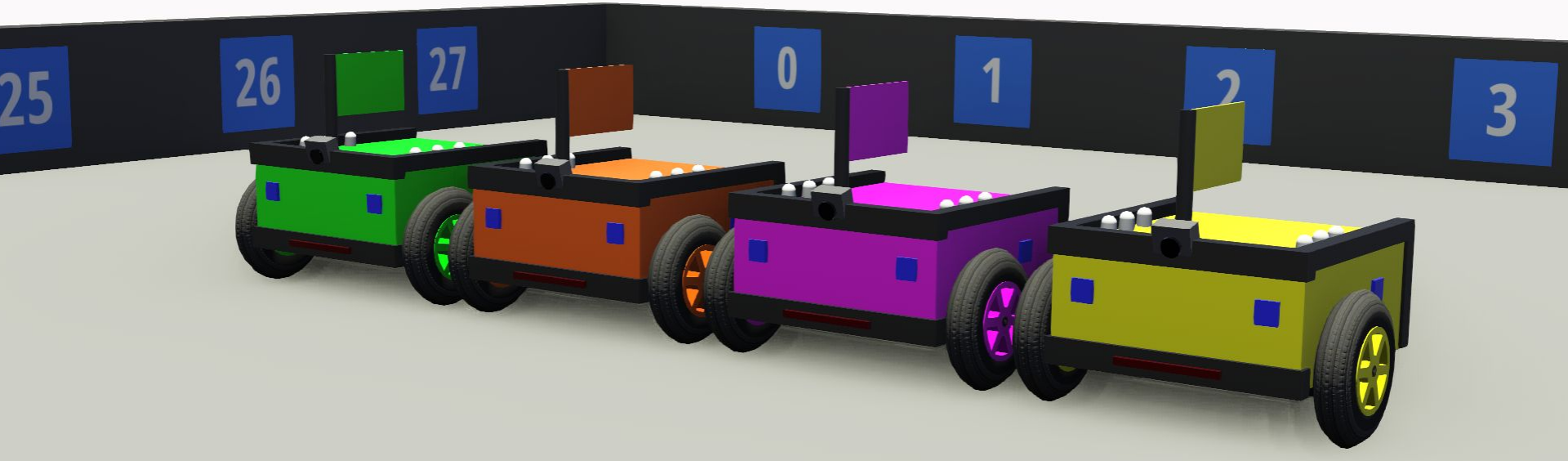
- Volunteers
- Tech Days
- Discord
- Bus factor
- Keep it simple
- Test early, and often

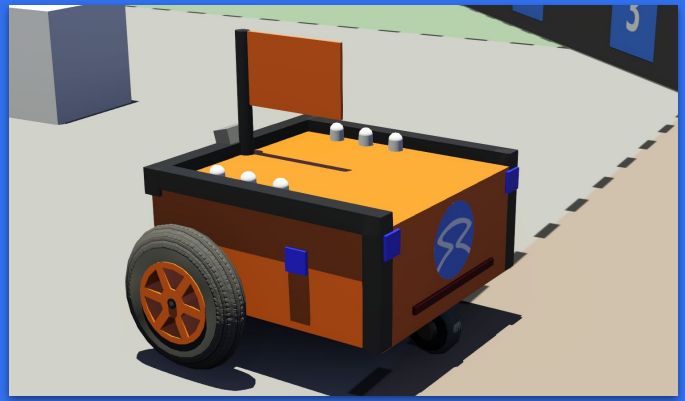
~~THE KIT~~

THE SIMULATOR


Sidebreaker
0
1
2
3
4
5
6
2:10
HHS2: Hills Road Sixth Form Co...
KSF: Kenilworth Sixth Form
LSS: Lawrence Sheriff School
JAM: JAMDynamics

YOUR ROBOT


25
26
27
0
1
2
3



- Distance sensors
- Radar
- Bump sensors
- LEDs

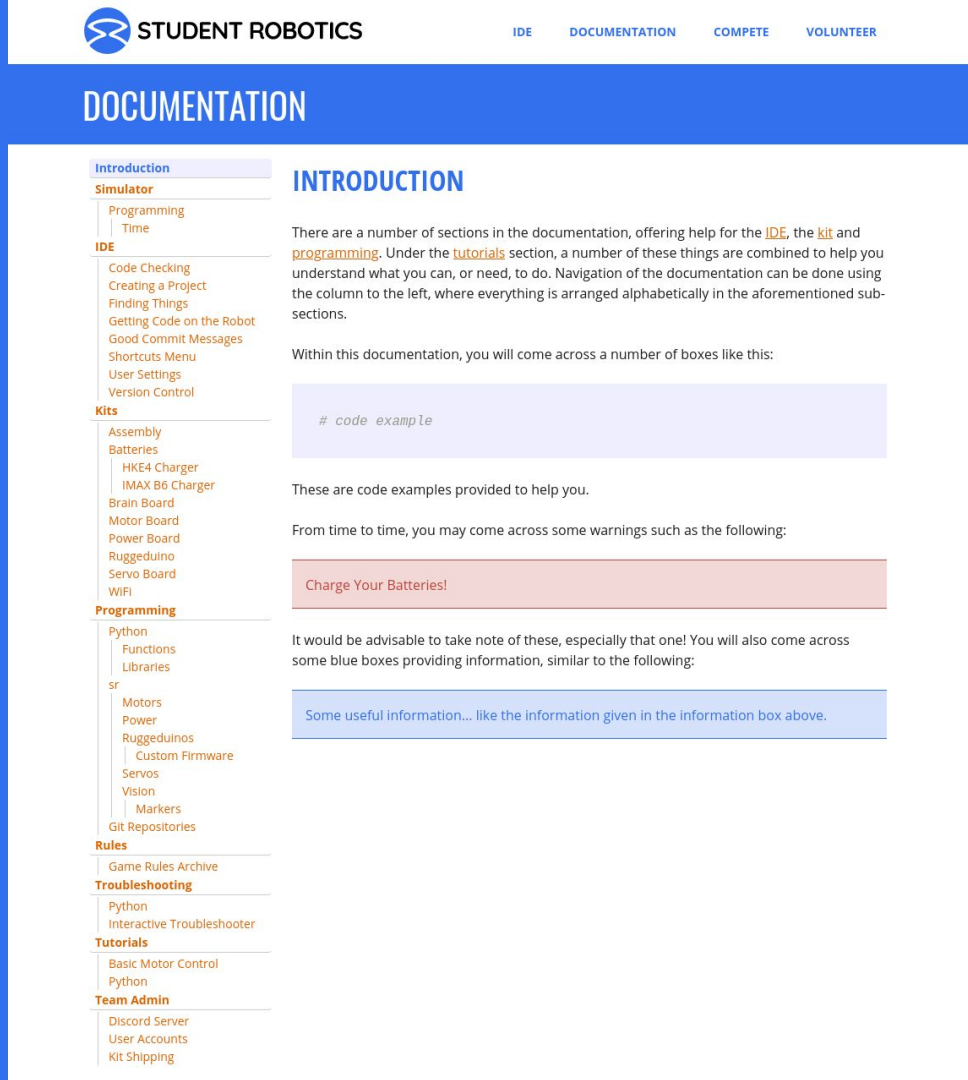
YOUR CODE

Your Code

- Python 3.7
- Local Development
  - Versioning
- Multiple robots at once

Read The Docs!

They’re really useful!



studentrobotics.org/docs

Our documentation

Discord

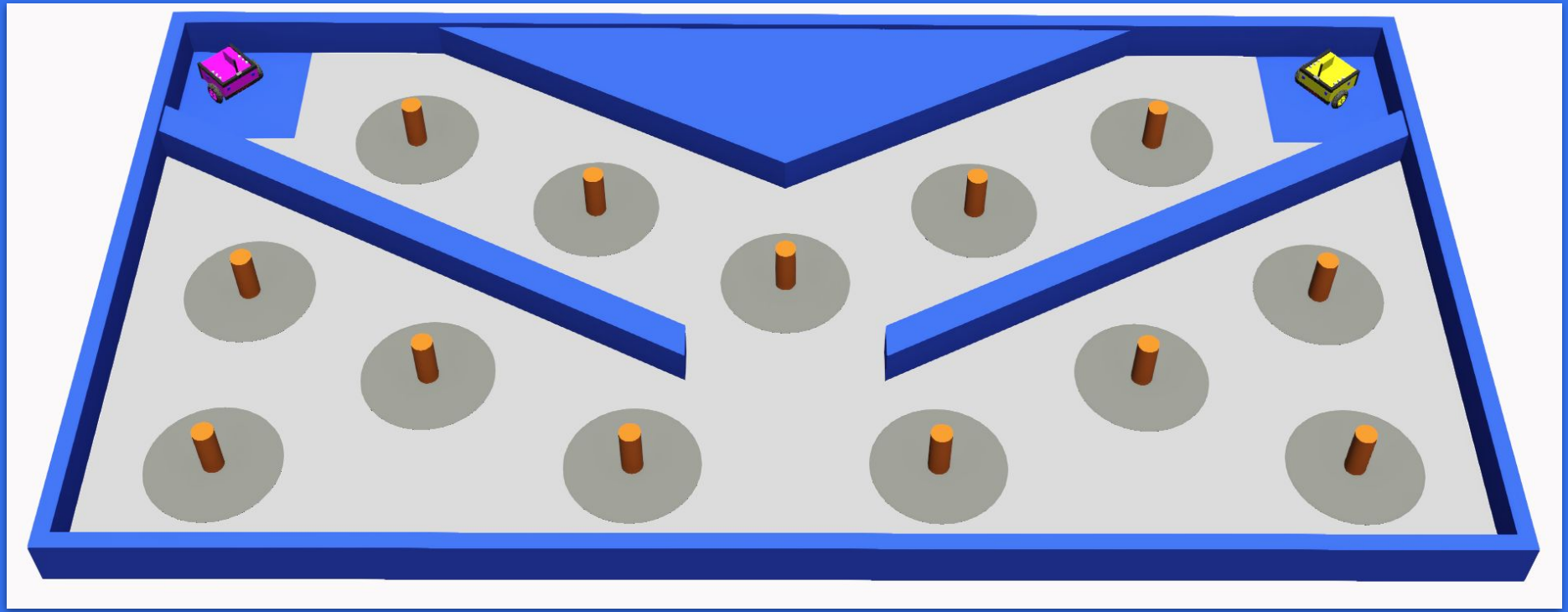
- Communicate with us and your fellow teams
- Get support
- Share tricks
- Brag about how good your team is!

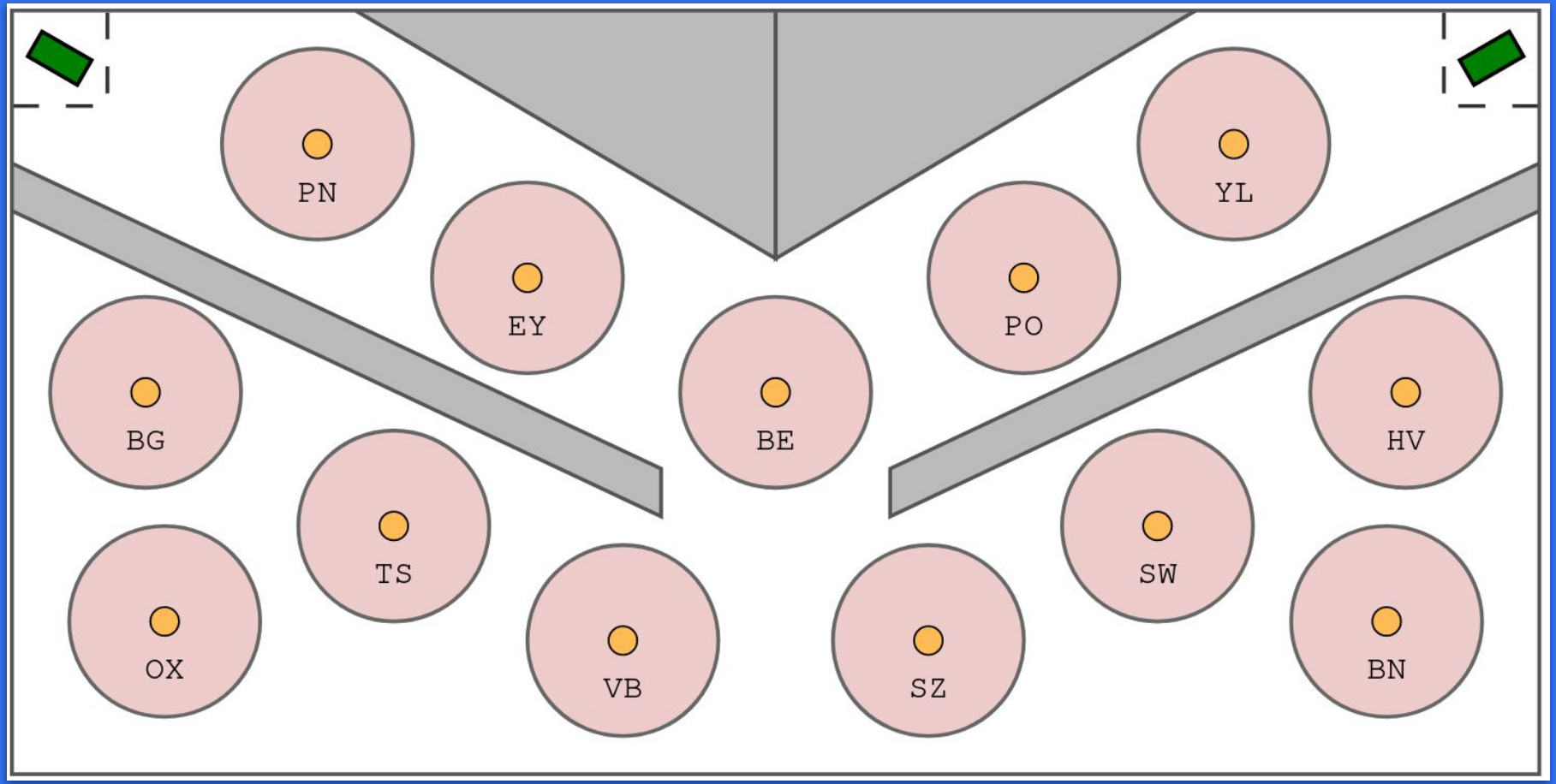

Debreaker
0
1
2
3
4
5
6
2:10
HHS2: Hills Road Sixth Form Co...
KSF: Kenilworth Sixth Form
LSS: Lawrence Sheriff School
JAM: JAMDynamics

THE GAME

The moment you've all been waiting for!

Radars of the Lost Ark




PN
EY
YL
PO
BG
BE
HV
TS
SW
OX
VB
SZ
BN

The Rules

Read them!

They're **very** helpful!

Student Robotics 2020 Rulebook

1st Revision

October 24, 2019

The following defines the rules and regulations of the Student Robotics 2020 competition. The latest version of this document can be found at https://www.studentrobotics.org/docs/rules/.

1. Game Rules

1.1 The game, called **Two Colours**, will be played in the arena defined in section 3.3. The objective of this game is to capture the most tokens, but without mixing the two colours.

1.2 Before a match begins, participating teams must:

a) Present their robot in the staging area, adjacent to the arena, before the scheduled close of staging time. The staging area will be clearly marked on the day.

b) Attach a robot flag. Robot flags will be provided by Student Robotics officials in the staging area. Section 3.2 provides more information about these flags, as well as their dimensions and mounting requirements.

c) Follow the directions of the match officials.

Teams that fail to comply with these rules–such as by arriving late–may forfeit the match, at the discretion of the judge.

1.3 A match lasts 150 seconds.

1.4 There will be a maximum of 4 robots in a match.

1.5 Robots will be started by, or at the direction of, match officials.

PRIZES

They’re what points mean!

First Place

Second Place

Third Place

Obviously!

Rookie Award

Highest placed rookie in the league

Online Presence

For those teams who are active online

Committee Award

For ingenuity & elegance in robot design

THE REST OF TODAY

Microgames!

QUESTIONS

GOOD LUCK!