Introduction to Programming

Chantilly Robotics (Team 612)

The Programming Subteam:

Programming

- Writes computer code for the robot
  - Without programming, the robot wouldn't move (*duh*)
- Solves software problems (*and mechanical problems, and electrical problems…. And every other robot issue where other people can't figure it out*)
- Vision Processing
- Telemetry
- Back-end web development
- Primary languages: C++, Python

Who should join programming?

- If you:
  - Love technology/computers/computer science
  - Love solving logic/mathematical problems
  - Are comfortable around and/or knowledgeable about computers
    - Bonus: Can code!
    - Bonus: Are currently taking a computer science course
    - Bonus: Can use Linux!
    - Bonus: Can blame electrical!
    - Bonus: Think "gif" is pronounced with a soft "g", like a "j" < me irl
  - Are willing to put in time outside of school to learn programming languages and skills
  - Like making fun of Ahmad

Divisions (new this year!)

What is the Division system?

- In an effort to ensure everyone has a tangible job on Programming, the subteam will now be partitioned into "divisions"
- Robot Code (WPI/C++) Divisions
  - Bus
  - Payload
- Telemetry Division
  - Driver Station application (EvenSmarterDashboard)
  - Data Logging
- Vision Division (DiVISION)
- Website Division
- Misc:
  - Scouting App & FRC_Recon
  - FRC_CI

What will you know by the end of the year?

What we will teach

- Proficiency in your division of choice
- Git, Github, and Gitlab
- One or multiple programming languages (C++, Python, C#, JS, Bash, etc)
- Common Linux commands (cp, ls, mkdir, etc)
- SSH
- CS skills that can be used for personal projects
- Working in groups
  - Web development
  - Programming for coprocessors (crosscompilers, etc)
  - Networking
  - Telemetry/data collection and organization

Contact Information

If you have any questions, here's how to get in touch with us!

Division lead Emails

- Ahmad Bamba - ahmad.eb.bamba@gmail.com (Programming captain/Robot Code)
- Shaun Wu - alexbay218@gmail.com (Robot Code)
- Ben Ward - ward.programm3r@gmail.com (Telemetry)

- Zach Perkins - zperk.zperk@gmail.com (!Zack, Vision)
- Calvin Godfrey - CalvinBBcard@gmail.com (Website)

(Continued)

Slack is still the quickest way to get to us

- Join if you haven't already
- https://chantillyrobotics.slack.com/ or download the app
- #programming, dms, etc

Discord (unofficial, non-serious)

- Ask for in on Slack

SIXTY-ONE WHO!? SIXTY-ONE TWO!

Absolute sacrilege.