```
FTC-Robotics-Championship/
├── code/                        # Python code for robot operation
│   ├── autonomous/              # Autonomous mode code
│   │   ├── main_autonomous.py   # Main script for autonomous operations
│   │   ├── navigation.py        # Navigation and movement functions
│   │   └── sensor_integration.py # Code for integrating sensor data
│   ├── teleop/                  # TeleOperated mode code
│   │   ├── main_teleop.py       # Main script for teleop mode
│   │   ├── drive_control.py     # Drive control logic
│   │   └── arm_control.py       # Arm and mechanism control
│   ├── utilities/               # Helper utilities and libraries
│   │   ├── pid_controller.py    # PID control for precise movement
│   │   ├── motion_profile.py    # Motion profiling for smoother paths
│   │   └── sensor_utils.py      # Utility functions for sensor data processing
│   ├── hardware_config/         # Hardware setup and configuration
│   │   ├── hardware_map.py      # Mapping hardware components
│   │   └── motor_setup.py       # Motor configurations and calibration
│   └── README.md                # Overview and instructions for the codebase
├── cad/                         # CAD designs for the robot
│   ├── assemblies/              # Complete assemblies of robot components
│   │   ├── robot_assembly.step  # Full robot assembly model
│   │   └── subsystem_assembly.step # Individual subsystem assembly
│   ├── parts/                   # Individual part files
│   │   ├── chassis.step         # Chassis model
│   │   └── arm.step             # Arm model
│   ├── rendered_images/         # Rendered images and visuals of the design
│   └── README.md                # Details on CAD files and assembly instructions
├── electrical/                  # Electrical and wiring information
│   ├── wiring_diagram.pdf       # Schematics for wiring components
│   ├── motor_controller_config.json # Motor controller configurations
│   ├── sensor_layout.md         # Description of sensor placement and layout
│   └── battery_management.md    # Notes on battery management and best practices
├── documentation/               # Project documentation and resources
│   ├── strategy_plan.md         # Strategy for the competition
│   ├── match_log/               # Folder to store match logs and notes
│   │   ├── match1_log.md
│   │   └── match2_log.md
│   ├── testing_logs/            # Testing logs and results for different components
│   │   ├── drive_tests.md
│   │   └── arm_tests.md
│   └── README.md                # Project overview, team information, and documentation guidelines
├── simulations/                 # Simulations and testing environments
│   ├── simulator.py             # Python script for simulating robot behaviors
│   ├── test_scripts/            # Scripts for testing specific functionalities
│   │   ├── autonomous_test.py
│   │   └── teleop_test.py
│   └── README.md                # Instructions for running simulations
└── README.md                    # Main project readme with high-level information
```