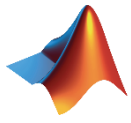
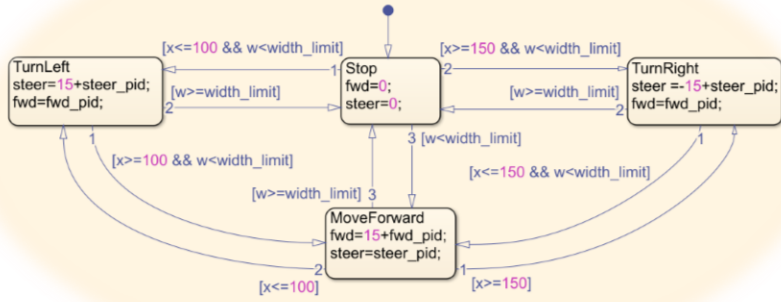


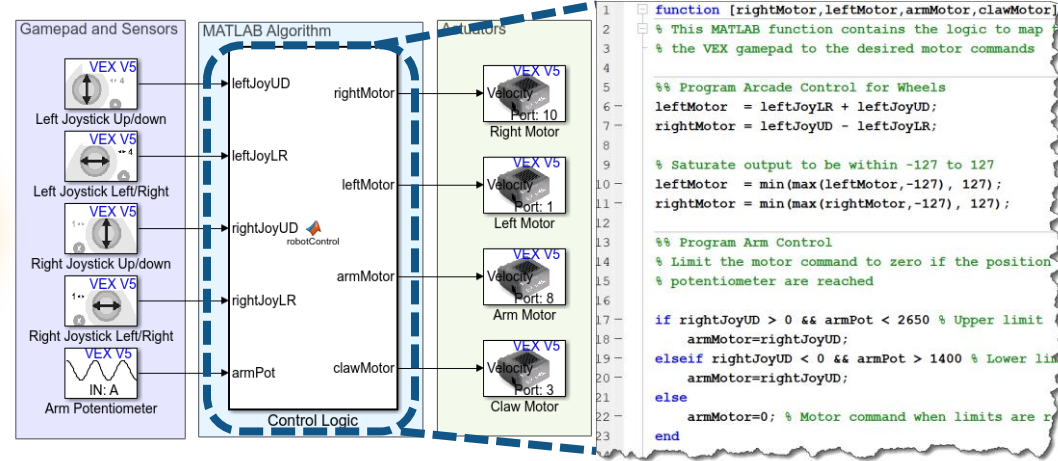
MATLAB and Simulink for BEST Robotics



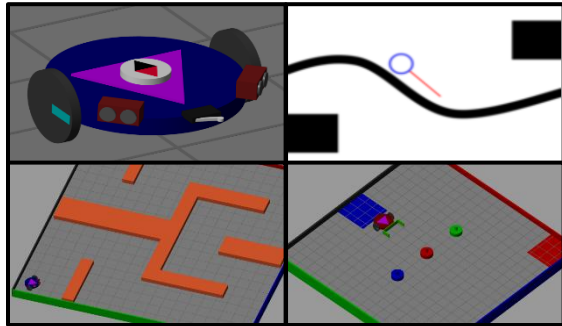
Flow Charts



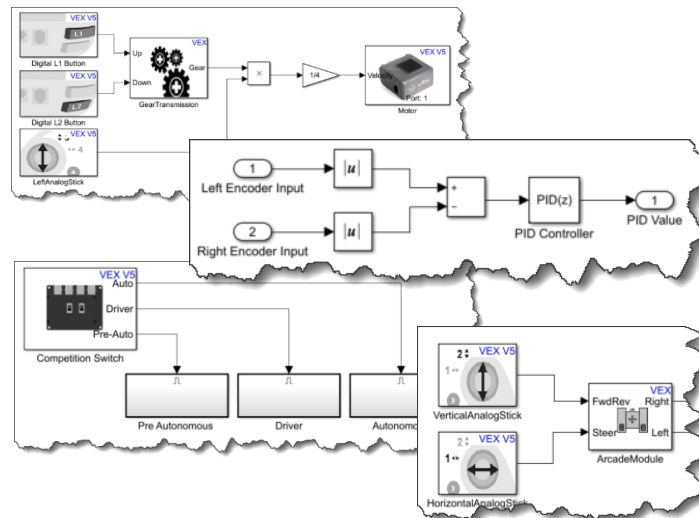
Graphical and Textual Programming



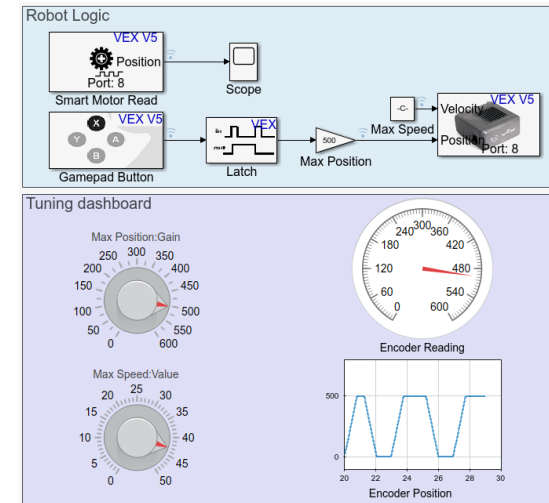
Simulations



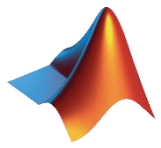
Hardware and Control Libraries



Parameter Tuning and Visualization



MATLAB and Simulink BEST Robotics Getting Started Guide



Computer Setup

1. [Request Free License](#)
2. Install:
 - [MATLAB and Simulink](#)
 - [VEX EDR Libraries](#)
 - [VEX Companion App](#)

Software Ramp Up

1. [Intro to MATLAB](#)
2. [Intro to Simulink](#)
3. [Intro to Stateflow](#)

Robot Programming

Simulations

[Mobile Robotics Tutorials](#)

1. Autonomous Robot Motion
2. Use PID Controllers
3. Design Line Following Robots
4. Detect Obstacles
5. Navigate a Path

[Robotics Playground](#)

1. MATLAB Programming
2. Autonomous Robot Motion
3. Simulink Modeling
4. Driver Controls
5. Program Distance Sensors
6. MATLAB Functions
7. Intro to Stateflow Charts
8. Maze Solving Robot Project

Additional Video Tutorials

- [Get Started with VEX EDR V5 support for MATLAB and Simulink](#)
- [Driver and Autonomous Control of VEX Robots](#)
- [Using Infrared Sensors for Robot Navigation](#)
- [Program VEX EDR V5 Smart Motors](#)
- [Robot Autonomy and Control Webinar](#)

[Documentation](#) [Instagram](#)

VEX Companion

The screenshot shows the VEX Companion application window with tabs for VEX V5, VEX Cortex, Virtual Worlds, and Learning Resources. On the left, there are buttons for 'New V5 Model', 'Open V5 Library', 'V5 Demos', and 'V5 Documentation'. In the center, there is a list of 'V5 Examples' including 'external_mode', 'gettingstarted_dcmotor', 'gettingstarted_servodashboard', 'pot_linetrack', 'servo_withDeadband', 'tankrobot_halfSpeed_MLfcn', 'tankrobot_setup', 'tankrobot_withGear', 'Clawbot_Auto_Fetch', 'Clawbot_Driver', 'Clawbot_Driver_Safety', and 'Clawbot_VRC_Template'. At the bottom, there are 'FAQ' and 'Help' buttons.

Hardware

[VEX Curriculum](#)

1. Autonomous Robot Motion
2. VEX Competition Template
3. Encoder Navigation
4. Program Distance Sensors
5. Use PID Controllers