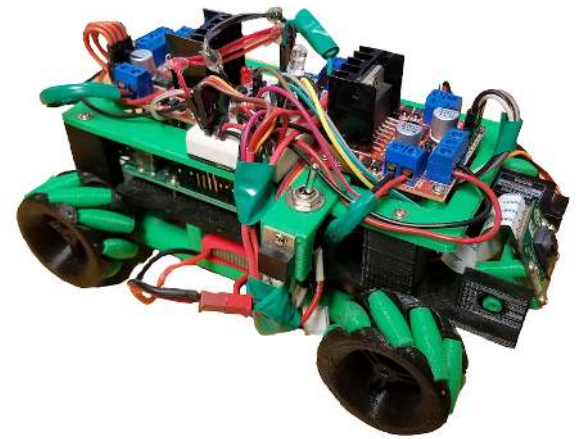


## MiniMcGee V1 - 2018

[github.com/superrm11/MiniMcGee](https://github.com/superrm11/MiniMcGee)

- Mecanum holonomic drive system
- Designed and assembled in Autodesk Inventor
- Programmed in Java, with Pi4J and OpenCV
- 3D Printed in PLA
- L298N motor drivers, N20 300RPM geared motors
- Powered by Raspberry Pi 3
- Controlled by bluetooth Xbox controller, or over WiFi with a Java Swing UI



## MiniMcGee V2 - 2019

[github.com/superrm11/MiniMcGeeV2](https://github.com/superrm11/MiniMcGeeV2)

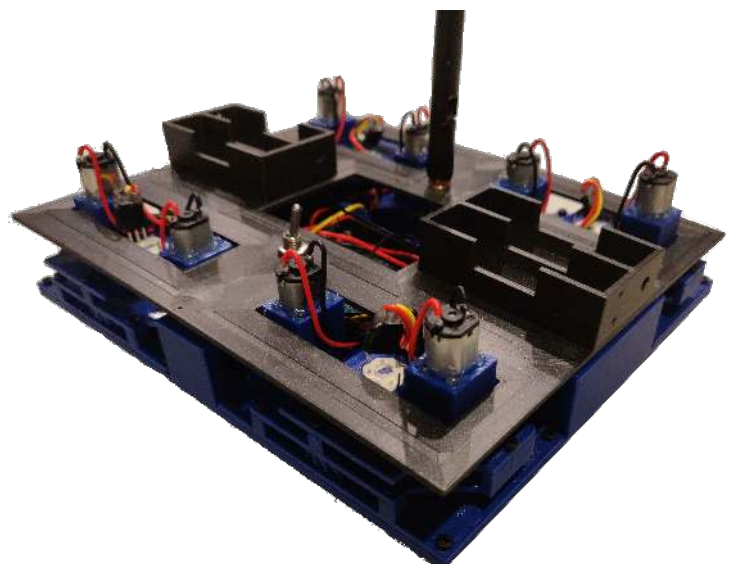
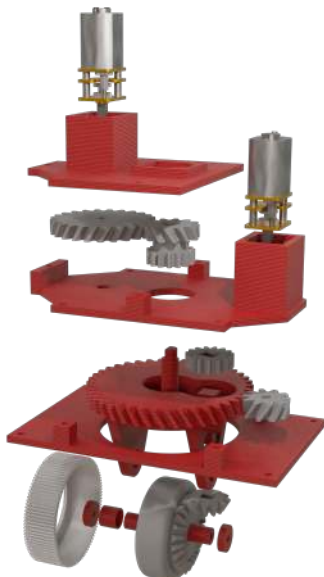
- Pseudo-swerve drive system
- Designed and assembled in Autodesk Inventor
- Programmed in Java, forked from MiniMcGeeV1
- 3D Printed in PLA
- N20 300RPM geared motors, stepper motors
- Powered by Raspberry Pi Zero W
- Controlled by bluetooth Xbox controller, or over WiFi with a Java Swing UI



## MiniMcGee V3 - 2021

[github.com/superrm11/MiniMcGeeV3](https://github.com/superrm11/MiniMcGeeV3)

- Fully continuous standard swerve drive system
- Designed and assembled in Autodesk Inventor, 3D printed in PETG
- Powered by ESP32 and programmed in C on FreeRTOS
- Uses continuous potentiometers and a 9-axis IMU over I2C
- Controlled over WiFi and Bluetooth, with a planned Android app



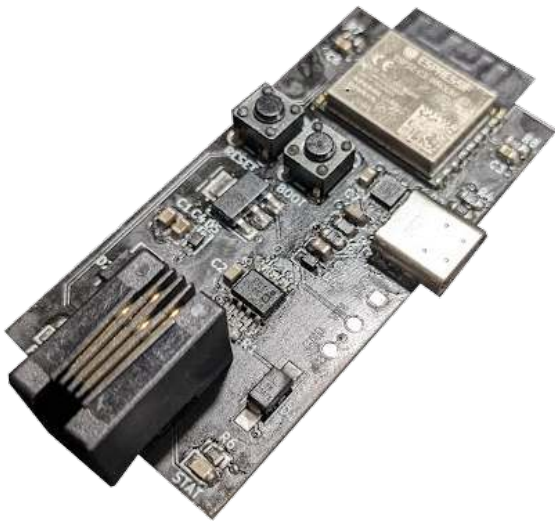
# Project Board

By Ryan McGee

## VEXU Swerve Drive - 2019-2021

[youtu.be/ayKqqlRq38k](https://youtu.be/ayKqqlRq38k)

- Prototyped in FreeCAD, Designed in Solidworks
- 3D Printed in PETG
- Adapted to use standard VEX Robotics parts
- Programmed in C++, with PID motion
- Developed over 5 iterations



## VEX Debug Board - 2022

[github.com/superrm11/VexDebugBoard\\_PCB](https://github.com/superrm11/VexDebugBoard_PCB)

- Connects to robots over RS-485
- Hosts foxglove.dev server and Wifi-AP
- Sends debug info over websocket
- Custom board designed in KiCAD
- Hand-assembled using reflow techniques
- Programmed in C using ESP-IDF

## OpenCV Network Pipeline - 2016

[github.com/superrm11/OpenCV\\_Projects](https://github.com/superrm11/OpenCV_Projects)

- Programmed in Java, client and server side
- Built for offboard processing, to save processing power on a robot
- Contains a GUI for easier configuration of the pipeline
- Allows multiple pipelines, multithreaded

