Workshop Title: ARDUINO PROGRAMMING FOR AUTONOMOUS ROBOTICS

Workshop Description: Learn about the exciting world of Robotics Programming in this hands-on workshop. In the workshop we will build an understanding of sensors, code and actuators that make Autonomous Robotics work.

Workshop Presenter: MINDS-i's General Manager, Levi Wilson, is a graduate of the Spokane Community College Diesel Mechanics program. Along with managing the daily operations of the business, Levi heads up technology and curriculum development at MINDS-i. Levi transcends the vision that robotics should mirror the technologies, machines and devices found in real-world, and his foresight is manifested in the design and development of MINDS-i's products and labs.

What to Bring: Laptop or Surface Pro

Workshop Length: 6 hours

FYI: Workshop is limited to 20 people

Workshop Outline:

PROGRAMMING FOR BASIC ROBOTICS
- Why Programming?
- Arduino, Sensor and Actuator Parts & Purposes
- Building a basic breadboard – Servo, ESC, QTI Sensor, Electric Motor, Ultrasound Sensor
- Arduino programming

PROGRAMMING FOR AUTONOMOUS ROBOTICS
- What Makes a Robot Autonomous?
- Understanding Basic Programming Control Structures
- Autonomous Obstacle Avoidance
- Line Following