Contained is a proposal for a lab for the University of Cincinnati’s engineering summer camp program. The program’s aim is to offer an introduction to robotics to incoming high schoolers. This project uses an Arduino controlled robot with an IR line follower to follow a predetermined line on the ground. Campers will be responsible for building the robot and utilizing functions to get it to follow a line.

Potential safety concerns include proper handling, small parts, and correct use of batteries. Robots should be picked up by the frame, not the wheels, to avoid damage to it. Small parts such as screws and nuts are utilized. Nine volt batteries are to be used safely to prevent injury.

Various potential stumbling blocks exist for our completion of this project, as well as for their completion of the lab. We could run into trouble with different Arduino libraries not meshing together correctly. Both us and students taking this workshop could run into problems with robot assembly, such as parts not printed correctly. Students’ possible lack of familiarity with Arduino and coding in general should be taken into account, and directions should be written accordingly.