Future Work

* Modification of Stripping Machine
  + The current stripping machine can only strip and cut to lengths which are manually entered. A modification must be included so that the machine can have an input.
* Transportation
  + The transportation of cables in this project has not been addressed. The current idea is that the cables will be directly pushed from the stripping machine into a flexible tube. The tube will then seal and be pressurised behind the cable, with a close fit the cable will be sent down the tube. The tube will terminate at the end-effector where it will enter the feeding mechanism.
* Cable Size Adaptability
  + The end-effector is ideally able to handle all the specified cables. Work will need to be done to modify the end-effector to do this. The current idea is to use continuously variable transmission techniques which change the effective diameter of pulleys.
  + The transportation will also need to handle all cables. It is believed that multiple tubes will be required to keep a close fit around the different sized cables. All of which will terminate at the end-effector.
* Connector End-Effector
  + An end-effector will be required for installing the connectors. It has not undergone any designing processes. It must be able to hold and press the connectors through the insulation of the cables. Current ideas include researching a way to have the connectors on a reel or tape which they can be cut from.
  + It will need an LED and a camera for image processing.
* Epoxy Filling of Junctions
  + It is the current impression that epoxy will fill the junctions to insulate the high-power cables from each other. Research will need to be performed to allow for this process.
* Return on Investment
  + The project’s overarching aims are to be faster and cheaper than traditional construction methods. As such, research into returns on investment, especially in reference to the status quo, will be needed to quantify this.
  + This will be specifically important to ZURU Tech.
* Error Handling
  + For a completely automated process, the system must be able to detect and correct errors. Research and development must be done to ensure that the system can reliably handle errors.
  + One idea involves a laser to check the extent of cable pressing. A horizontal laser could check if any sections of cable are lifted, and to what extent.
* Testing and Validation
  + Some parts of the project are not fabrication or even designed. As such, testing of individual parts and the system as a whole will be needed for validation. This will include shifting to a KUKA KR16 robot arm.