



Gear for Automation

Using Robotics to BRING BACK Jobs for Workers in Garments Industry

Motivation:

With the increasing adoption of robotics and automation technology by the manufacturers, garments workers in Bangladesh, majority of whom are female, are at risk of losing their jobs. To avoid a potential humanitarian predicament arising from sudden massive unemployment, workers need to be provided adequate opportunities for alternative employment, breaking socio-cultural barriers if required, as very few other options are available for them. We are motivated to bridge the gap between workers and a possible alternative trade.



Female garments workers at work in Bangladesh
Image courtesy: RMG Bangladesh [www.rmgbd.net]

Goals:

Our goal is to provide a new window of opportunity for the workers by offering alternative vocation as electricians and automation technicians. A three-phase program will be developed, carried out over a year, to aid a target group to transition.

- Phase 1: Easy Introductory training in electrical systems and electronics. We will develop simple and fun training boards reusable for numerous circuit configurations. We will also develop easy curriculum in Bengali.
- Phase 2: Formal vocational training for electricians.
- Phase 3: Successful participants among the target group will be provided training on automation with another custom robotics education program and board in Bengali.

Why the proposed alternative vocation?

- ✓ Requires logic, method and hands-on dexterity, easily adapted by workers based on their current skills.
- ✓ Indoor work, not physically intensive.
- ✓ Untapped market for female technicians.
- ✓ Rising need of robotics/automation technicians by emerging companies.

Deliverables:

For this RAS-SIGHT project, we will establish the base of an educational training program for a small focus group of workers by providing them updated vocational skills by introducing to them concepts of basic electronics, and eventually robotics and automation. Our technical contribution would be in designing inexpensive educational hands-on platforms in Bengali and creating content (experiments) for those platforms. These platforms will enable the workers to learn new skills, develop confidence and practice their new knowledge safely. Our solution brings to the table a bottom-up plan to decrease the gender bias as well as increase the technology competency of future generations in the long run. Deliverables include:

- Education/Trainer boards in Bengali (from Phase 1 and Phase 3)
- Regular updates on sustainable solution strategies as discussed with beneficiaries
- Replicable model of training and curriculum that can be adopted anywhere in the country



Trainer boards to be developed are inspired by SnapCircuits®
Image courtesy: Elenco Electronics. [www.elenco.com]