Snake Bot

Implementation:

- Learning about Arduino coding, servo motors.(10 days)
- Segmented robot with servo motors between each to generate wave like motion and wheels to generate forward motion.
- Working on mechanical body of snake with some research on real ones.
- Planning and implementing the electrical circuit.(Both mechanical n electrical part take around 20-25 days).
- Debugging and finishing (Remaining 2 weeks).

Components:

- Arduino or raspberry pi board. (Around- 800)
- Servo motors. (200-300 each)
- Mechanical equipments.
- Electrical components.
- Total cost almost (5000-6000)

Learning Outcomes:

- About Arduino coding.
- Working of various types of motors.
- About mechanical aspects of body like centers and balancing.
- Finally a lot of knowledge about snakes.

Motion Tracker

Implementation:

- Learning about Arduino/Raspberry pi coding, Matlab, OpenCV.(10 days)
- Image processing using software and generating required outcome.
- Working on mechanical body of Robot.
- Electrical circuit and its best possible placement.(Both mechanical n electrical part take around 20-25 days).
- Debugging and finishing (Remaining 2 weeks).

Components:

- Raspberry pi board. (Around- 800)
- Camera.
- Mechanical equipments.
- Electrical components.
- Total cost (almost 5000)

Learning Outcomes:

- About Raspberry pi coding.
- Working of image processing softwares such as OpenCV.
- About Fast motion tracking and coordinated result.
- About wireless control.