MVJ COLLEGE OF ENGINEERING
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Report on Biped Robot design

Two-day Hands-on Training on Biped Robot

As a part of **VertechX-10.0**, Department of Electronics and Communication Engineering, MVJCE, organized an advanced training on Robotics and Industrial Automation in which students trained on **Designing of Biped Robot.** This training was conducted in collaboration with **AMZ Automotives India. 72 students** from different disciplines participated in this training program. The training was coordinated by **Mr. Bhanuteja G** (AP, ECE) and **Ms. Varsha P H** (AP, ECE). It was conducted on **28th** and **29th February, 2020. Mr. Pratik and Mr. Amit** from AMZ India were the trainers.

Two Day hands-on Training on Biped Robot organized by Robolab on 28 and 29 Feb 2020.
Dr. Murali C, IETE chairman, Bengaluru addressing the gathering, (LtoR) Mr. Amit(AMZ India), Dr. P Mahabaleshwarappa(Principal, MVJCE) and Mr. Pratik(AMZ India).

As the Robots industry is reaching its pinnacle, there is a rapidly increasing opportunity in the fields of consumer, industrial, military and office robots. The journey of Robotics learning starts with basic design and control. At this Workshop, students understood about different phases in robot development, mathematical calculations, the coding involved, electronics control design in coding servo motors for biped design.

Two Day Hands-on Training on Biped Robot organized by Robolab on 28 and 29 Feb 2020.
Mr. Pratik, AMZ India explaining to students about different types of robot based on controlling mechanism.

This training was divided into two sessions. In the first session, the trainers explained about the basic of robotics and how to choose components for different robots. They also elaborated on the ARDUINO nano and the components required for the basic robot. At the end of the session, students assembled the robot chassis and made the basic movements of a robot.
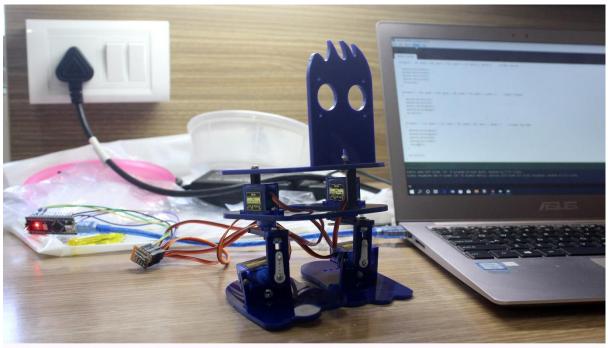

Two day Hands-on training on Biped Robot organized by Robolab on 28 and 29 Feb 2020.
4th semester ECE studentts assemling parts of biped robot during the training.

The second session of the training was on developing an App on android platform, using MIT App Inventor. Students learnt about the difference between front end and back end design, and they designed their own app to control the locomotion of the robot. They also learnt to integrate Bluetooth module to the robot.

Two day Hands-on Training on Biped Robot organized by 28 and 29 Feb 2020.
Mr. Pratik from AMZ India explaining servo motor coding for students at Robolab

Later, they were taught how to code the robot for forward and different movements.

Two day Hands-on Training on Biped Robot organized by Robolab on 28 and 29 Feb 2020.
Biped Robot designed by a students team during the hands-on training.

Outcomes:

- Students learnt about the basics of Robotics, and how to choose the microcontroller and Motors for different robotic applications.
- They learnt the interfacing of different components with the Arduino development board, for BIPED ROBOT.
- They learnt about servo motor interface and the kinematics behind the servo coding for 4 servo motors.
- They learnt to use their knowledge to design a Biped robot.