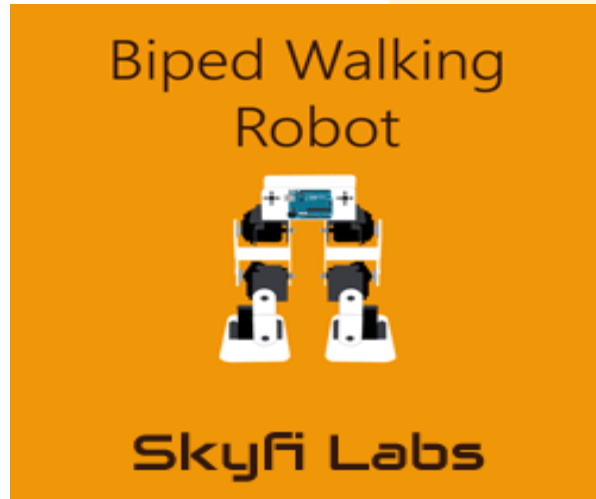# AADHRITA 2020
MVGR COLLEGE OF ENGINEERING (A)

Biped Walking Robot

EVENT DESCRIPTION:

By participating in this hands-on workshop, you will learn to build a two legged robot or a biped walking robot which will have six degrees of freedom with a hip, knee & foot and mimic the walking action of humans.

By building this biped walking robot project, you will practically learn about Arduino architecture & its programming, working of the servo motors - which acts as actuators & the programming logic behind the human's walking action.

COURSE HIGHLIGHTS:

- Introduction to Servo Motors, Embedded systems & Microcontroller
- Introduction to design and development of Biped robot
- Understanding the Electronics circuit involved in Biped
- Understanding Arduino Architecture and its programming
- Programming of Biped according human's walking strategy

COURSE STRUCTURE & TOPICS COVERED:

- Expert lecture on different kinds of robots especially legged robots-**3 hours**
- Fabricating the outer structure of Biped Robot**- 2 hours**
- Introduction to robotics programming Software – **2 hours**
- Programming session and introduction to Servo motors – **4 hours**
- Demonstration of Biped robot and Testing - **2 hours**

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- Awards and Certificates **- 0.5 hours**

ELIGIBILITY:

Anybody interested in Mechatronics Technology, Humanoid Robotics, Arduino Programming, Industrial Robotics can attend this workshop. Students of EEE/ECE/MECH/CSE/CIVIL/IT are eligible to apply for the workshop

CERTIFICATION AND AWARDS:

- Certificate has a value at international standards.
- "**Certification of Completion**" to all the students who successfully completed the workshop.
- "**Certificate of Completion with Distinction**" to the top performing participants in the workshop.
- The winners of the competition will be awarded with the **Robo Kit.**

Hardware Kits

- Arduino Uno
- Servo Motors - 6 Nos
- Servo Extender Cables
- USB to UART Cable
- Barrel Connector
- Battery Connector
- Multipurpose Servo Brackets
- Metal U Clamps
- Metal L Clamps
- Robot Feet
- Breadboard & Wire
- 1 pin Connectors
- Screwdrivers*
- 2.4V USB Adapter

(*) These Tools are part of the Hardware Tool kit and will be taken back.

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REGISTRATION FEE: 900/- per participant

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