Akhil A B

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Education

- **College of Engineering Trivandrum (CET)** — Thiruvananthapuram, India
  Graduation; B.Tech Applied Electronics and Instrumentation — *August. 2016 – April. 2020*
- **Technical Higher Secondary School Muttada** — Thiruvananthapuram, India
  Higher Secondary; Electronics Service Technology; Score 78% — *June. 2014 – May. 2016*

Experience

- **TechWithUs PVT LTD** — CET, Thiruvananthapuram
  Hardware Developer — *March 2019 - Present*
  - **ExamMarker**: ExamMarker is a product developed using python, electron, javascript, Web and PHP. I contributed in developing the sections that used python, electron and javascript. I handled the hardware part of the device. The hardware includes power management, single board computer and many more.
- **IoT Lab** — CET, Thiruvananthapuram
  Student faculty — *September 2016 - January 2019*
  - **Arduino UNO**: The Arduino UNO is an open-source micro-controller board based on the Microchip ATmega328P micro-controller and developed by Arduino.cc. As a member of student faculty, I was given the chance to take classes on Arduino UNO to the students of CET.
  - **Raspberry Pi**: The Raspberry Pi is a tiny and affordable computer that can be used for practical projects and to learn programming. I took workshops on Raspberry Pi.
  - **LoRa**: LoRa (Long Range) is a spread spectrum modulation technique. It is the first low-cost implementation of chirp spread spectrum for commercial usage.

Workshops Taken

- **Raspberry Pi Workshop** — CET, Thiruvananthapuram
  IOT Lab — *2018*
  - **Python**: This workshop was conducted by a team of 4 students including me. In this workshop, I handled Communication session.
- **Arduino Workshop** — CET, Thiruvananthapuram
  IOT Lab — *2018*
  - **Arduino**: This workshop covered all the sections from Arduino basics, embedded C, micro controller vs micro processor, sensors and few basic programs.
- **Beaglebone Workshop** — CET, Thiruvananthapuram
  IOT Lab — *2018*
  - **Hardware**: This workshop was conducted by a team of 4 students including me. In this workshop, I handled hardware session.
- **Raspberry Pi Workshop** — CET, Thiruvananthapuram
  IOT — *2018*
  - **Pi**: This workshop was conducted at Drishti (Technical Fest, CET). The session included about introduction Raspberry Pi, Linux, working remotely, Python and home automation using Pi.

My Projects

- **Build your own google home**: DIY google home smart speaker using raspberry pi. This project is available at https://github.com/theonlyakhil/Build-your-own-google-home.
- **System Information Display Raspberry Pi**: An 0.96 inch OLED display is used for showing system informations of raspberry pi. This project is available at https://github.com/theonlyakhil/system-information-display-for-raspberry-pi.
- **CNC Machine**: CNC machine using old DVD drive from computer with GRBL driver and arduino.
- **Weather Display**: A smart weather display that shows weather forecast informations with a OLED display built in.

- **Smart Plug**: A plug that can control with google assistant voice commands.
- **Battery Management unit (BMS)**: A battery management system for portable embedded devices ,using the IC from TI BQ25895. This project is available at https://github.com/theonlyakhil/BQ25895-smart-battery-management-circuit-for-portable-devices
- **Smart Switch with status memory**: A Switch that can be controlled via both physically or through mobile phone.

Programming Skills

- **Languages**: Embedded C, Python **Technologies**: Linux, TKinter
- **Softwares**: Atmel Studio, Eagle, Fritzing, KiCAD, EasyEDA, Arduino IDE