Abhishek Pandit

Senior Embedded & Iot Engineer

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Aswath Nagar, HBR Layout, Bengaluru 560077

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✉ **Abhishekpandit28@gmail.com**

Talented IoT & Embedded Engineer with 5 + years designing and incorporating reliable, efficient circuits and designs. Versed in emerging electronic development and planning tools, including Python & C. Comfortable working on solo projects or as part of team development efforts.

SKILLS

Embedded C, Python, C++, PCB Design, Embedded Hardware, Embedded Software, Microcontrollers, Firmware, ESP32, FOTA, Spi, I2C, UART, MQTT, IFTTT, HTTP, Blynk, UBIdots, Adafruit io, WiFi, OpenCV, Raspberry Pi, Arduino IDE, Pycharm, Microsoft Visual Studio Code, Sensors, Linux, Docker Containers, VectorCast, GDB debugger, Amazon AWS IOT, GIT, GIRA, Mantis bug Tracker.

EXPERIENCE

Accentus Consulting Private Limited, Kolkata *- Electronics & Iot Engineer*

JULY 2018 - MARCH 2021

- **Prime Hr -** Prime Hr is a Biometric & RFID based Attendance Device. The live of current attendance data can be viewed in the web application.

  Tech Stack - ESP32, RTC Module, Fingerprint Sensor, Custom PCB, Php, Embedded C, C++, Python , Raspberry Pi 3b+, Php, Mysql.

  Roles & Responsibilities:
  - Design & Development of Hardware Devices(Custom PCB)
  - Design and development of Custom Library for Biometric Sensor
  - Design & Development of API to store data in MySql DB
  - Design & Development of Firmware using Embedded C
  - Mdash Configuration For FOTA
  - Deployment of the device in Client Location.
  - Give Training to Client's Engineer for Troubleshooting of problem

- **Accentus Prime** is an ERP solution for the textile and garment industry With a combination of web Application and hardware automation. By the help of Accentus Prime hardware, machines current / live data like RPM, Fault, Run time Etc can be tracked and shown in ERP.
  Tech Stack- Embedded - ESP32, Raspberrypi, Python , Embedded C, SICK Sensors, Custom PCB, Php, Mysql.

  Roles & Responsibilities:
  - Design & Development of Hardware Devices(Custom PCB)
  - Design & Development of Api to store data in MySql DB
  - Design & Development of Firmware using Embedded C
  - Design and development of Custom Library for SICK Sensor
  - Mdash Configuration For FOTA
  - Deployment of the device in Client Location.
  - Give Training to Client's Engineer for Troubleshooting of problem

- **Home Automation** - The IoT based Home Automation will enable the user to use a Home Automation System based on Internet of Things (IoT). Modern homes are automated through the internet and the home appliances are controlled. The user commands over the internet will be obtained by the Wi-Fi modems.
  Tech Stack - Embedded C(Firmware), C++, Python, BLYNK, ESP32,IFTTT, UBIDOTS,MQTT.

  Roles & Responsibilities:
  - Design & Development of Hardware Devices(Custom PCB)
  - Design & Development of Firmware using Embedded C
  - Mdash Configuration For FOTA
  - Configuration of Different web services like UBIDots
  - Deployment of the device in Client Location.
  - Give Training to Client's Engineer for Troubleshooting of problem

Bliss Connect India Private Limited, Delhi - *Iot & Hardware Engineer*
JULY 2021 - March 2022

- **Master Mote** - MasterMote is a smart IOT device which consists of multiple sensors.This device is a FOTA enabled device. Mastermote detects the change in temperature, Humidity & different kinds of gasses and sends data to the server. This device can be configured by any browser.
  Tech Stack - ESP32, Embedded C, Custom PCB, Mysql.

  Roles & Responsibilities:
  - Design & Development of Hardware Devices(Custom PCB)
  - Design & Development of Api to store data in MySql DB

- Design & Development of Firmware using Embedded C
- Mdash Configuration For FOTA

- **Door Sensor -** Door Sensor is a FOTA enabled Iot device which detects door status (open or close) and sends the door status to the server using https. Door sensor works on battery power, so it also supports battery saving mode using the deep sleep method. This device can be configured by any browser.
  Tech Stack - ESP32, Embedded C, Custom PCB, Mysql.

  Roles & Responsibilities:
  - Design & Development of Hardware Devices(Custom PCB)
  - Design & Development of Api to store data in MySql DB
  - Design & Development of Firmware using Embedded C
  - Mdash Configuration For FOTA

AhamCo Services Private Limited, Kolkata *- Iot & Hardware Engineer*

April 2022 - May 2022

- **Universal Master Mote** - Universal MasterMote is a smart IOT device which consists of multiple sensors.This device is a FOTA enabled device. Mastermote detects the change in temperature, Humidity & different kinds of gasses and sends data to the server. This Device also acts as a smart wifi router. This device can be configured by any browser.
  Tech Stack - ESP32, Embedded C, Custom PCB, Mysql.

  Roles & Responsibilities:
  - Design & Development of Hardware Devices(Custom PCB)
  - Design & Development of Api to store data in MySql DB
  - Design & Development of Firmware using Embedded C
  - Mdash Configuration For FOTA

L&T Technology Services, Bengaluru *-Senior Engineer*

May 2022 - Current

- **TCTS (VOBC- Vehicle on board control)** - This Project comprises Parts of the Train like Break control, Door Control, Speed, zone control etc. This project is a Component testing and is only used for combining all Components and functionality of the train. Each component has a corresponding set of device Functionality that can be used by the application to use the testing modules.

  Industry Mode : aerospace and rail (EN-50128(Railway)-SIL 4)
  Duration : May -2022 to till date
  Testing Method : White box testing, Black box testing, Aggregate testing, CBA(Coverage by analysis and SBT(Scenario based testing)
  Programming Language : Embedded C
  Automation Test Tools : VectorCAST/C++ 2019sp3

Compiler : GNU Native 6.3(C++11)
Other Tool : understand c, Beyond compare.
Tested Type : Unit and Regression testing ,Integration testing,(ASIL B/C).

Roles & Responsibilities:
• Unit and Regression testing using VectorCAST 2019sp3 tool
• Writing test cases for unit testing.
• VectorCAST test environment creation and test case execution.
• Structural coverage analysis of the Statement, Branch and MC/DC.
• Writing notes for test cases in the VectorCAST tool.
• Merging and reviewing test cases.
• Executing Test cases in VectorCast.
• Generating test reports.

● **FINCH** - This Project comprises Parts of the Train like Break control, Door Control, Speed, zone control etc. This project is a Component testing and is only used for combining all Components and functionality of the train. Each component has a corresponding set of device Functionality that can be used by the application to use the testing modules.

Industry Mode : aerospace and rail (EN-50128(Railway)-SIL 4)
Duration : May -2022 to till date
Testing Method : White box testing, Black box testing, Aggregate testing, CBA(Coverage by analysis and SBT(Scenario based testing)
Programming Language : Embedded C
Automation Test Tools : VectorCAST/C++ 2019sp3
Compiler : GNU Native 6.3(C++11)
Other Tool : understand c, Beyond compare.
Tested Type : Unit and Regression testing ,Integration testing,(ASIL B/C).

Roles & Responsibilities:
• Configuration of VectorCAST 2019sp3 tool in Ubuntu 18.04
• Technical Support to team
• Distribution of work in Team.
• Team Handling
• Unit and Regression testing using VectorCAST 2019sp3 tool
• Writing test cases for unit testing.
• VectorCAST test environment creation and test case execution.
• Structural coverage analysis of the Statement, Branch and MC/DC.
• Writing notes for test cases in the VectorCAST tool.
• Merging and reviewing test cases.
• Executing Test cases in VectorCast.
• Generating test reports.

- **Platform Software** - This project is a Component testing and is only used for combining all Components and functionality of the train. Each component has a corresponding set of device Functionality that can be used by the application to use the testing modules.

Industry Mode : aerospace and rail (EN-50128(Railway)-SIL 4)
Duration : May -2022 to till date
Testing Method : White box testing, Black box testing, Aggregate testing, CBA(Coverage by analysis and SBT(Scenario based testing)
Programming Language : Embedded C
Automation Test Tools : VectorCAST/C++ 2019sp3
Compiler : GNU Native 6.3(C++11)
Other Tool : understand c, Beyond compare.
Tested Type : Unit and Regression testing ,Integration testing,(ASIL B/C).

Roles & Responsibilities:
• Configuration of VectorCAST 2019sp3 tool in Ubuntu 18.04
• Technical Support to team
• Unit and Regression testing using VectorCAST 2019sp3 tool
• Writing test cases for unit testing.
• VectorCAST test environment creation and test case execution.
• Structural coverage analysis of the Statement, Branch and MC/DC.
• Writing notes for test cases in the VectorCAST tool.
• Merging and reviewing test cases.
• Executing Test cases in VectorCast.
• Generating test reports.

EDUCATION

Narula Institute Of Technology,Kolkata - *BTech In Electronics & Communication engineering*

AUGUST 2014 - JUNE 2018

CGPA-7.32

Suraj Mandal Inter College,Poraiyahat - *Higher Secondary (Science)*

MARCH 2011 - MARCH 2013

Marks - 56.2

Nand Kishor High School,Raghunathpur- *Secondary School (General)*

Marks -62.4

CERTIFICATES

- **Foundation Program (07/2016 - 11/2016)**

  Foundation Program Under Infosys Campus Connect Program - 2016

- **Remote Sensing Application And Sciences (12/2016 - 12/2016)**

  One Day Workshop On Remote Sensing Application And Sciences RSAS By IEEE GRSS - 2016

- **QIP On Electronics System (03/2017 - 03/2017)**

  One Week QIP On Electronics System (Under TEQIP PHASE II) - 2017

- **Advanced Telecom (06/2017 - 07/2017)**

  Vocational Training on Advanced Telecom From NSCBTTC West Bengal -2017

AWARDS

- **Star of the Month**

- **Spot Awards**

- **C-SAT Star**