Aditya Biswas

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PROFESSIONAL SUMMARY

Insightful Electronics Engineer with extensive experience in Embedded Firmware development, Hardware designing, and debugging. Proficient in job-related software, including Various IDE's. Focused and dedicated professional possessing first-rate problem-solving skills to develop innovative, new solutions to complex problems.

Adept at working independently with little to no supervision or as part of a professional engineering team. Able to convey complex technical theories and concepts to a wide variety of audiences in a clear and accessible manner. Always eager and ready for challenges to explore new areas and Technical fields.

SKILLS

- BSP development Yocto, Buildroot
- Device Tree, Device driver and Kernel level programming
- C, C++, Linux, BASH,Yocto, U-boot, IoT, Python, JavaScript, SQL, HTML and CSS
- NXP,IMX 8, IMX6 BSP Development
- RAUC ,SW-Update, OTA
- Nordic, STM, ATSAMD, Cypress(PSoC), NXP, 8051
- Low Power Device Development
- Github, Confluence, JIRA, Altium workspace, AutoDesk Eagle, AutoDesk Fusion 360
- Hardware and software Debugging
- JTAG, J-link, Segger,OTiii, GDB debugge

WORK HISTORY

Senior Firmware Engineer 01/2024 to present
Firmware Engineer 09/2022 to 12/2023
Trackonomy Systems Pvt. Ltd – Indore City, IN (San jose, USA)

- Firmware development of various platform including BSP and Device driver development for NXP IMX series Processors
- C/C++ application development on Linux machine for embedded devices
- C/C++ application development for low power microcontroller device (Nordic and ATSAMD series)
- U-Boot and Kernel Level designing for various Boards (Kirkstone and Hardknott)
- Yocto BB layers recipes architecture designing and development
- Designing of OTA architecture over RAUC and Telemetry over internet
- development of firmware for wireless device including RFID(GEN2) ,BLE, LoRa and WiFi

Research and Development Engineer, 07/2018 to 07/2022
Scientech Technologies Pvt. Ltd – Indore City, IN

- Research and Development of products as per customer's guidelines with ISO documentation.
- Designing 3D CAD models and 2D circuit designs alongside programming of microcontroller from various sources like STM, AVR, Nordic, ESP, Cypress to provide seamless and fast embedded solutions.
- Exploring various disciplines like Embedded, analog, and digital domains to solve complex engineering problems.

PROJECT HIGHLIGHTS

RFID Gateway
Trackonomy Systems Pvt. Ltd

Developed a powerful AEC-Q100 and industrial-grade RFID Reading Gateway for the automotive sector, incorporating NXP i.MX 8 and Impinj RFID reader technologies. Built on a customized OS based on Yocto, with support for RAUC OTA, the kernel-level design consists of custom device drivers and a BSP to support various integrated features, providing RFID Gen2 compliance while supporting long-range EPC Tags. The solution stands out for its high-power, high-speed, and configurable capabilities, coupled with low power consumption.

IOT Tags (Smart Tape)
Trackonomy Systems Pvt. Ltd

Collaboratively led the design and implementation of a groundbreaking Industry 4.0 Tamper Detection and Tracking System based on NB-IOT/LTE as part of a dynamic team. Developed a highly portable and slim device with a months-long operational duration, leveraging high-performance, low-power BLE ecosystems based on Nordic microcontrollers. and seamless integration of Sequans NB-IoT modules, enhancing connectivity for real-time monitoring and tracking capabilities. The project, executed in Segger Studio, showcased my proficiency in optimizing firmware for efficiency and reliability.

Food Monitoring System (Scientech 6207)
Tata Research Development and Design Centre

The product was designed and developed to study the ripening of Food/ organic material in a climate-controlled Chamber. The chamber was designed and developed with abilities to raise and lower the temperature from a range of 5 degrees to 90 degrees Celsius. By using various sensors including NIR sensor, Oxygen, Co2, Co, etc. the product can collect the data samples of the sensors and log it offline as well as online. The data then can be viewed, downloaded from the offline server, and can be used to train various machine learning models

Portable Analytic Chamber (Scientech 91)
Tata Research Development and Design Centre (Offsite)

Portable Analytic Chamber provides various solutions including camera, temperature, humidity, heated bed, and various gas sensors to measure various parameters of test subjects over a long period in an easy-to-carry package with see-through body and wireless connectivity. Users can also check the values of various parameters with an onboard LCD display and log data over USB and wireless receiver. This data can then be fed to various machine learning algorithms to study the various characteristic of the subject.

EDUCATION

Bachelors of Engineering: Electronics and Instrumentation, completed 2018
12th standard: CBSE Board with 76.6% in 2014.
10th standard: CBSE Board with 8.4 CGPA in 2012.

HOBBIES

- Designing and making 3D models.
- Playing Video Games
- Tech Enthusiast
- Reading Magazines and Blogs

ADDITIONAL INFORMATION

- DOB: 04-01-1997
- Gender: Male
- Nationality: Indian
- Marital Status: Unmarried
- US VISA B1/B2 Stamped
- Language Known: Hindi, Bengali, English
- Father's Name: Mr. Arun Chandra Biswas
- References: Mr Rajeev karothia (Assistant Manager Yash Technologies)

DECLARATION

I ADITYA BISWAS solemnly declare that the information is truly stated and correct up to my knowledge.

Date: Place: Indore

ADITYA BISWAS