

Internship Report

Vishweshwar Kapil Raut Dessai

2047

Inventrom Pvt Ltd- Bolt IoT

Goa University

**REPORT OF INTERNSHIP DONE AT Inventrom
Pvt Ltd- Bolt IoT**

Completed by:

Vishweshwar Kapil Raut Dessai

2047

For the partial fulfilment of
MCA Degree for Semester VI
Discipline of Computer Science and Technology,
Goa Business School,
Goa University

At

Inventrom Pvt Ltd-Bolt IoT
Indiranagar, Bangalore, Karnataka

UNDER THE GUIDANCE OF

Mr. Pranav Kundaikar
(CTO)

Ms. Joyner Fernandes
(HR Manager)



Date: 11th June 2023

TO WHOMEVER IT MAY CONCERN

This is to certify that **Mr Vishweshwar Kapil Raut Dessai**, student of Master of Computer Applications(MCA) of Goa University, Goa, is currently undergoing his semester VI internship with our organisation from **2nd January 2023, which will end on 30th June 2023.**

During his tenure to date, he has met the expectations of his team leader and was found to be sincere.

This certificate was issued on his request for project report submission at Goa University.

The final internship completion certificate will be issued upon completing his internship tenure.

For Inventrom Private Limited,

Joyner Fernandes
Human Resources Manager



GOA BUSINESS SCHOOL

CERTIFICATE OF EVALUATION

This is to certify that **Mr. Vishweshwar Kapil Raut Dessai** has successfully completed his internship at **Inventrom Pvt Ltd- Bolt IoT, Bangalore, Karnataka** in partial fulfilment of the award of the degree in Master of Computer Application.

Examiner 1

Examiner 2

Place: Goa University

Date: 16/06/2023

Dean, Goa Business School

ACKNOWLEDGEMENT

I am privileged to have done my internship in the Inventrom Pvt Ltd- Bolt IoT. I got a great chance for learning and professional development and growth.

I thank Mrs. Jyoti Pawar (Dean, Goa Business School, Goa University), Mr. Ramdas Karmali (Prof. and TPO, MCA, Goa Business School, Goa University), Mr. Ramrao Wagh (Program Director, MCA, Goa Business School, Goa University), Mr. Hanumant Redkar (Assistant Prof, MCA, Goa Business School, Goa University) and all the faculty of MCA, Goa University for their constant encouragement and support during the project work.

I would like to thank Mr. Pranav Pai Vernekar(CEO), Mr. Pranav Kundaikar(CTO) for giving me an opportunity to intern at Inventrom Pvt Ltd- Bolt IoT.

I would like to take this opportunity to acknowledge and extend my sincere gratitude to everyone who has guided and assisted me throughout the course of this Internship Period. First and foremost, I would like to thank my Guide/Mentors Mr. Pranav Kundaikar(CTO), Mr. Pranav Pai Vernekar(CEO), Ms. Joyner Fernandes(HR manager).

I would like to express my special gratitude and thanks to Inventrom Pvt Ltd- Bolt IoT employees for giving me such attention and time.



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INTRODUCTION

This internship report describes the tasks carried out during 6 months, full time internship period by Mr. Vishweshwar Kapil Raut Dessai which commenced on 2nd January 2023 at Inventrom Pvt Ltd-Bolt IoT, Bangalore Karnataka. In accordance with curriculum of the VI semester Industrial Training of the MCA program, Goa University, Goa.

In the chapters that will follow, I will talk about the company and elaborate on the tasks I worked on, a brief information about the tasks I worked on. I will also provide information on the technologies studied and tools used during the internship. I shall conclude by sharing my experience with the company during the internship.

COMPANY PROFILE



Inventrom Pvt Ltd-Bolt IoT is the creator and manufacturer of the Award Winning Bolt IoT Platform designed for Enterprises and Makers to seamlessly Build and Scale their own IoT products. The Platform is an entire environment of WiFi Hardware Module for Sensor/Actuator Integration, A Cloud Dashboard with tools for product development, Data Visualisation, Machine Learning and a Smartphone Application for Remote Operation and Management. Bolt IoT platform gives you the capability to control your devices and collect data from IoT devices safely and securely no matter where you are. Get actionable insights by deploying machine learning algorithms with just a few clicks to detect anomalies as well as predict sensor values.

Inventrom Pvt Ltd-Bolt IoT products are:

1. Blake : An enterprise temperature and humidity monitoring system
2. Bolt IoT and ML platform: A fully integrated IoT platform for developers that helps them to build IoT projects and products quickly and easily.

Inventrom Pvt Ltd-Bolt IoT also offer popular training on topics like IoT & ML, Robotics, Voice Apps, Web Development, Augmented Reality etc for their users to get started with building projects. Bolt has users across 62 different countries with more than 40,000 units of the hardware module shipped.

Company website: <https://www.bolttiot.com/>

Internship Journey

The first day of internship started with the in-depth introduction by HR about company and products.

Hardware/Software Trainings:

The company provides hardware/software trainings to its users those who are students. Any newly recruited employees in tech team has to complete hardware training which is IoT and ML training.

Training on tools/software used:

The newly recruited employees are taught to use the tools such as Slack for communicating with team and Zendesk to answer/resolve customer queries.

Setting up development environment:

Guide/Mentor onboarded me on setting up computer for development tasks.

The company has following Apps/services:

Bolt Cloud: This is a flask app which provides users to manage their bolt devices.

Metrics App: This is a flask app for marketing/finance employees of Inventrom Pvt Ltd- Bolt IoT.

WhatsApp manager: This is a service to handle WhatsApp related tasks.

Remote API app: This is a flask app to handle remote API calls.

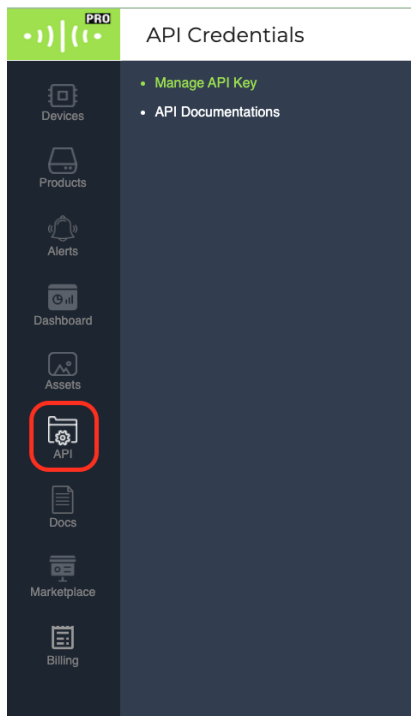
During internship the following tasks were done every working day:

1. Clearing Slack messages
2. Clearing Zendesk tickets
3. Marking older Zendesk tickets as solved

During 1st month of internship following were the development tasks carried out on the above apps/services and other additional tasks by me:

During 1st Sprint:

1. Complete IoT and ML training.
2. Set up development environment for Bolt Cloud and Metrics App
3. Revert the change for the Christmas logo.



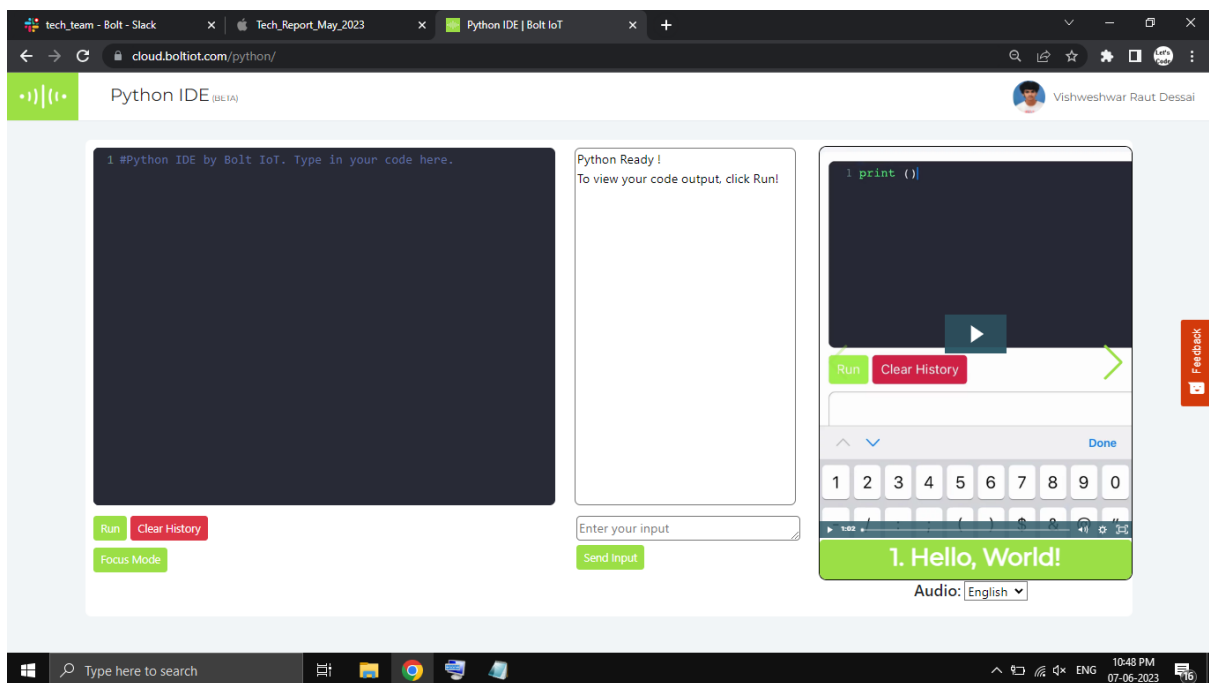
During 2nd Sprint:

1. Add a feature for Linking and unlinking of owner of device from Metrics App
2. Fix Scrolling bug on on dashboard feature.
3. Fix Cloud Pro logo not shown correctly on training page.
4. Fix Device name not shown on alerts page when device name is not set by the user.

During 2nd month of internship following tasks were carried out by me:

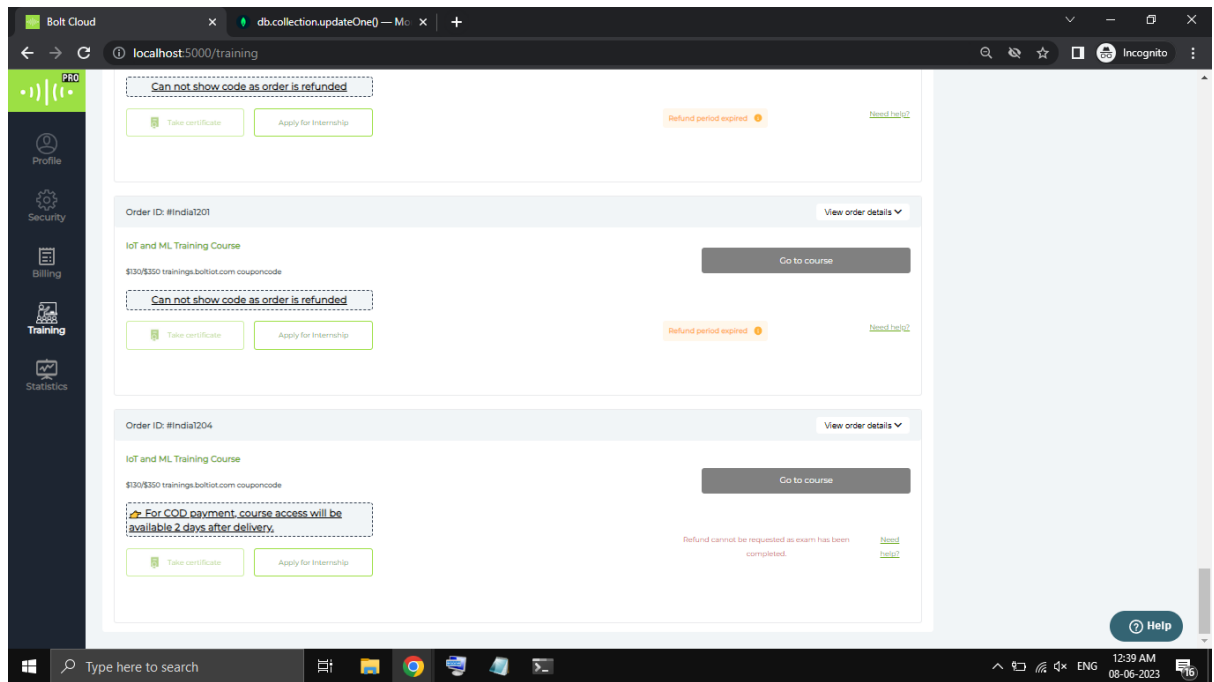
1. Updates to Python IDE page
 1. Make the default comment disappear whenever clicked on python editor if editor is empty.

2. Make the default comment appear whenever clicked outside of python editor if the editor is empty
2. Reduce the size of the video to add more elements
3. pause background videos whenever switched to next or previous video
4. Clear History every time we run the code
5. Add a text section with a WhatsApp share button in last slide of video
6. Add an option to the bottom of video to change the language of videos. Upon change of language new list of videos will be loaded.

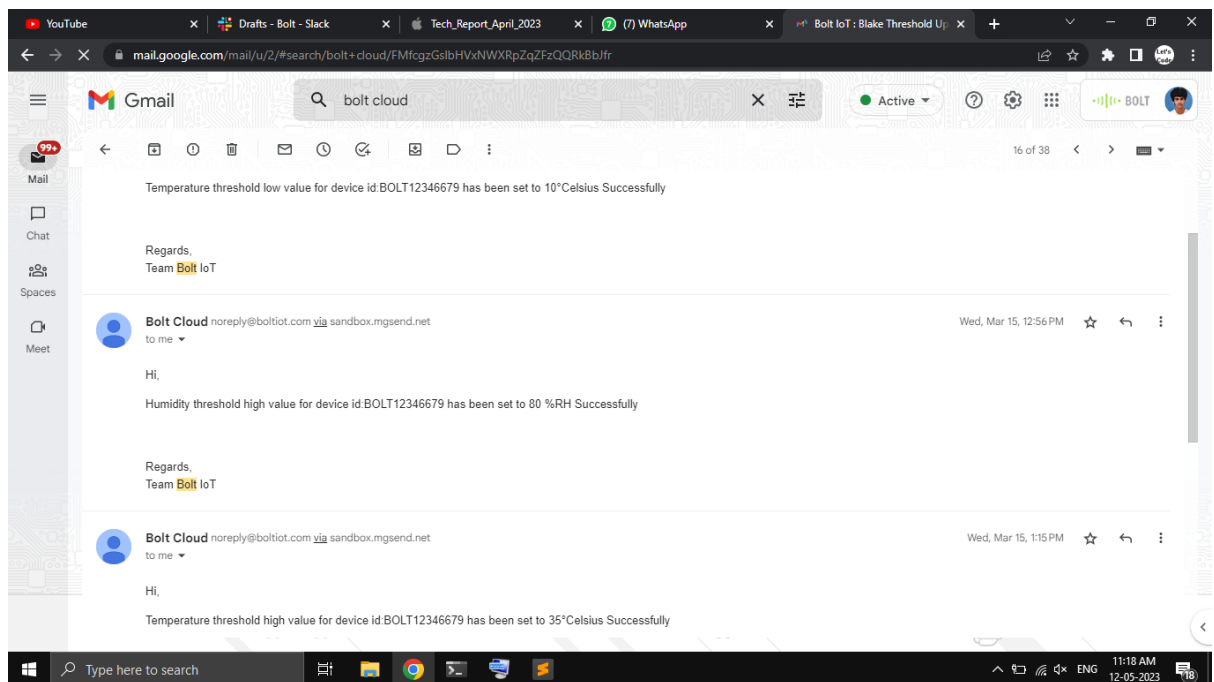


During 3rd month of internship following tasks were carried out by me:

1. If training certificate test taken or offer letter is given then don't allow refund

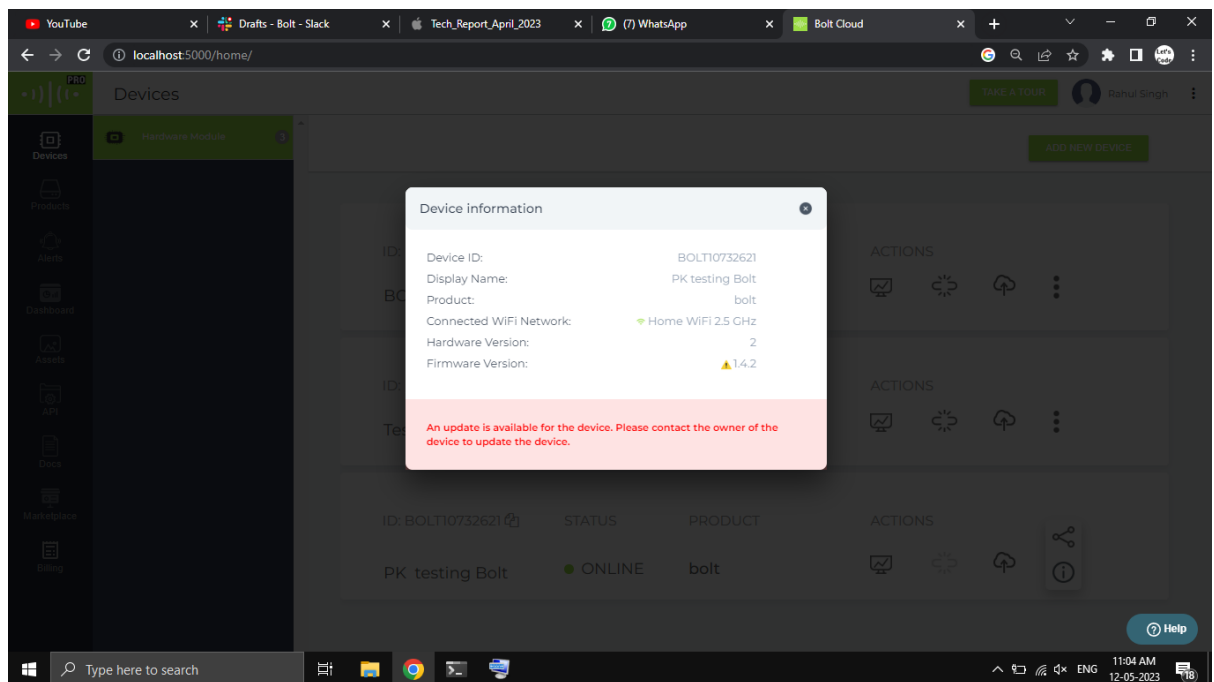


2. Raise hotfix for alert.js PR
3. Send alert notification in case user modifies the thresholds or alert conditions or other actions on the cloud to the owner account. Also block editing of thresholds for non admin users of device.

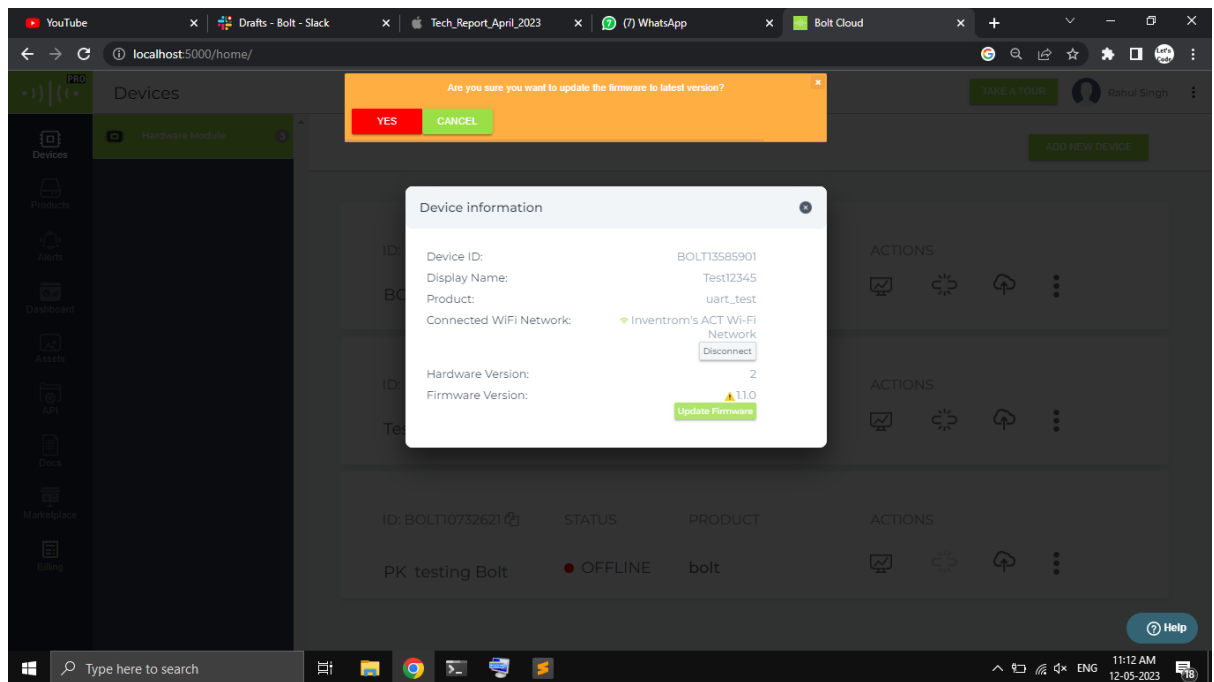


During 4th month of internship following tasks were carried out by me:

1. Adding audio list in alerts page. Also storing alert in db and also retrieving the saved alert when an alert is edited.
2. Blocking of WiFi disconnect button for non-admin(not owner of device) users

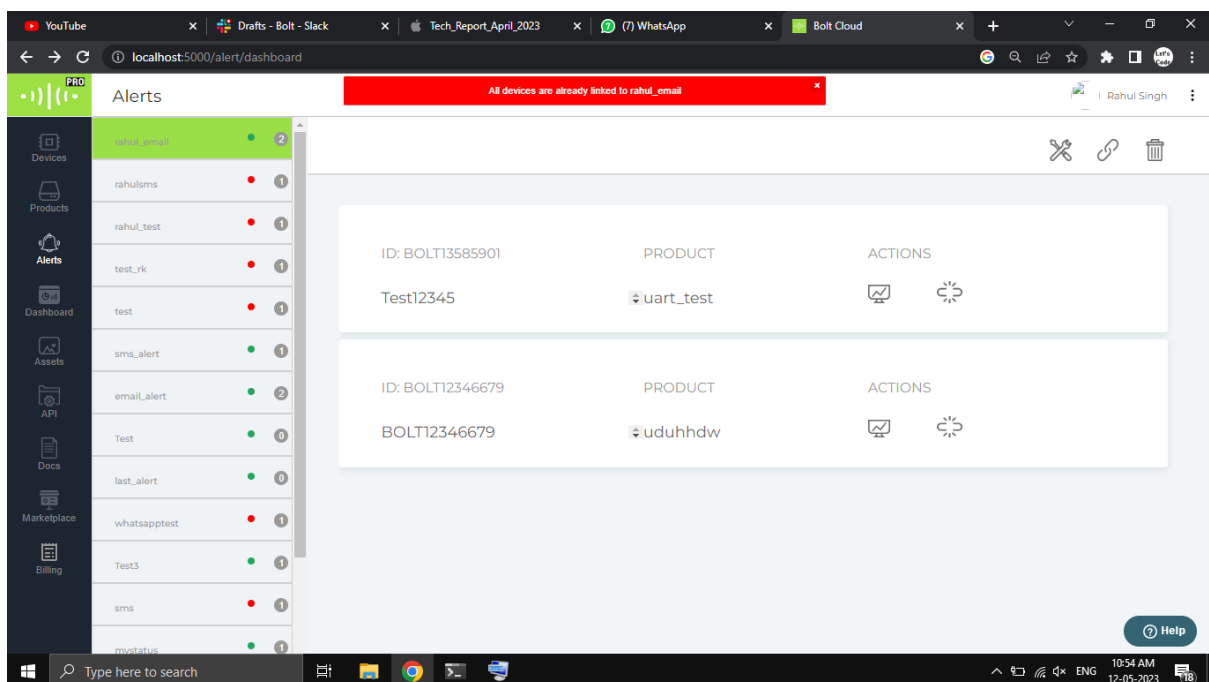


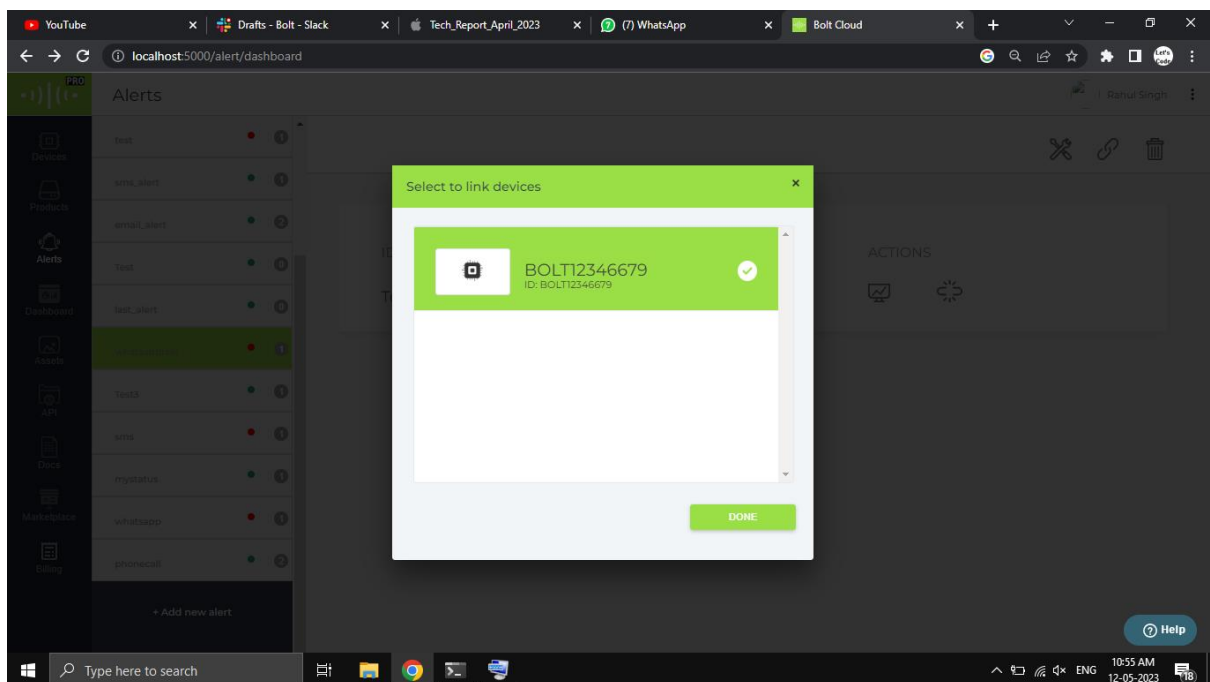
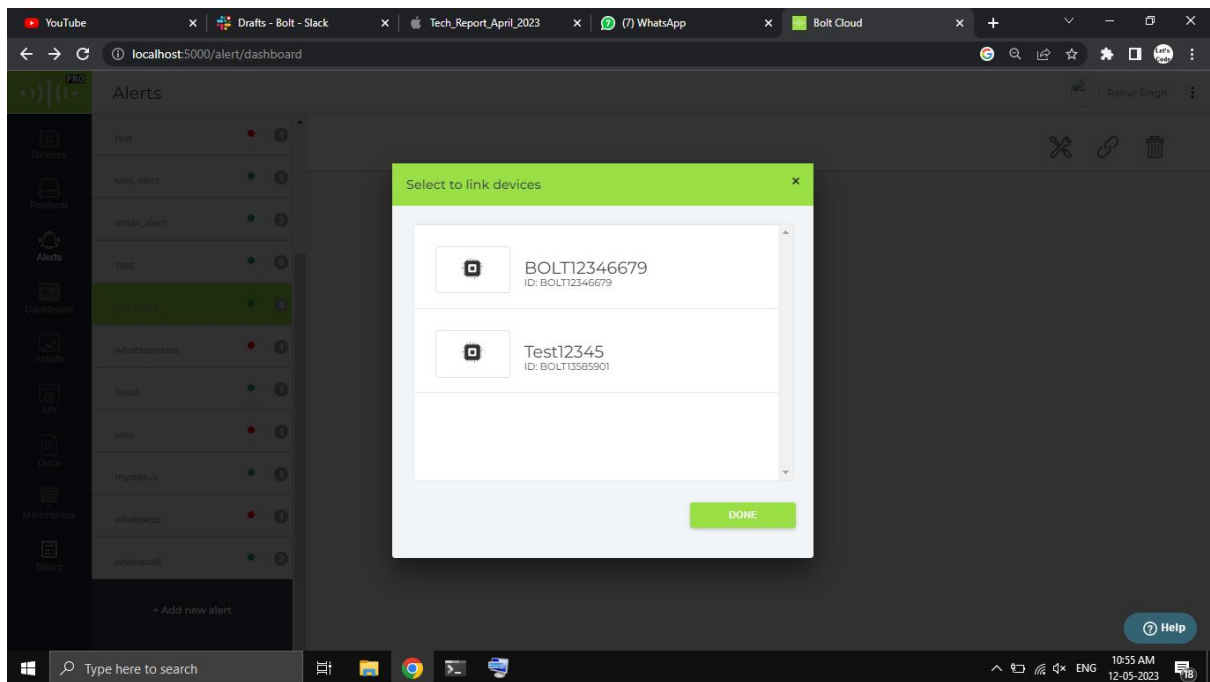
3. Adding confirmation before triggering OTA update

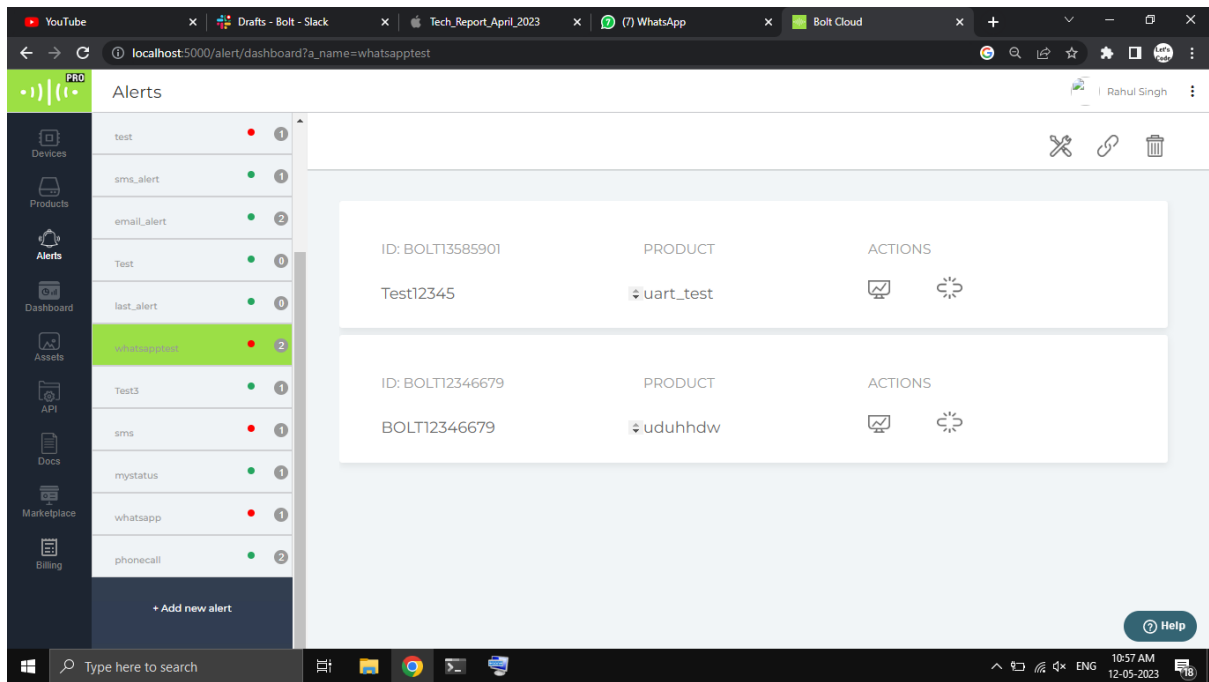


4. Updates to alerts feature frontend

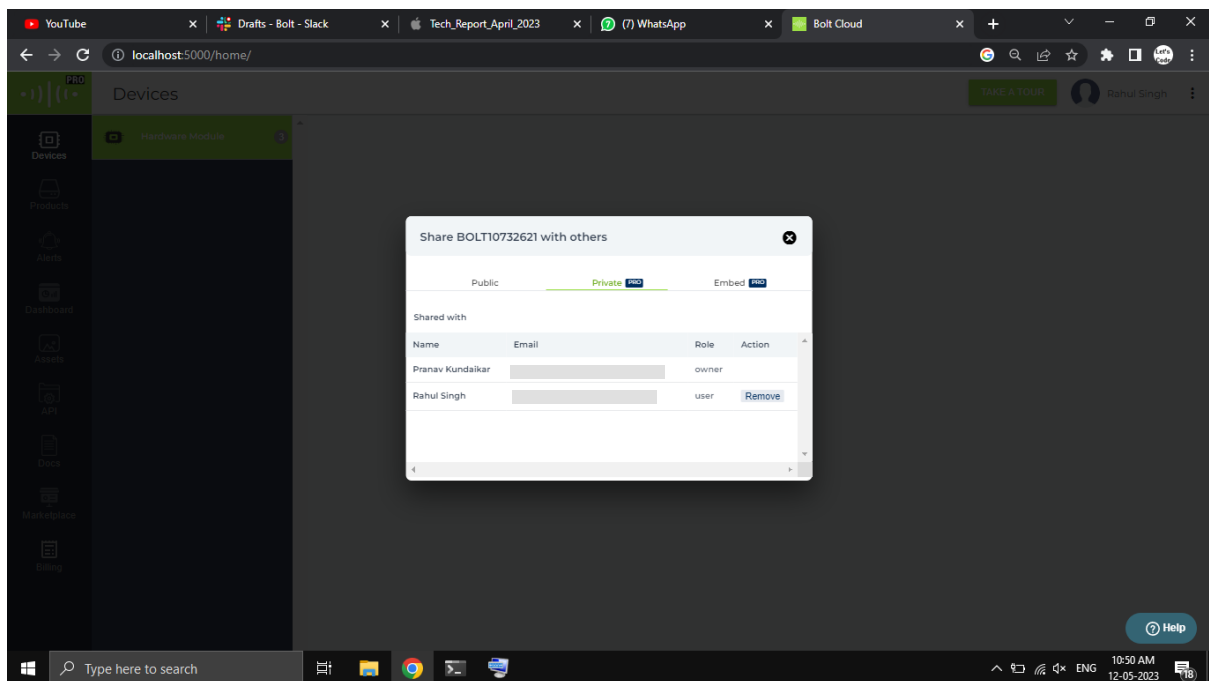
- a. highlighting the correct alert in the sidebar when user links/unlinks a device to an alert
- b. removing an already linked device from the list of devices displayed during linking

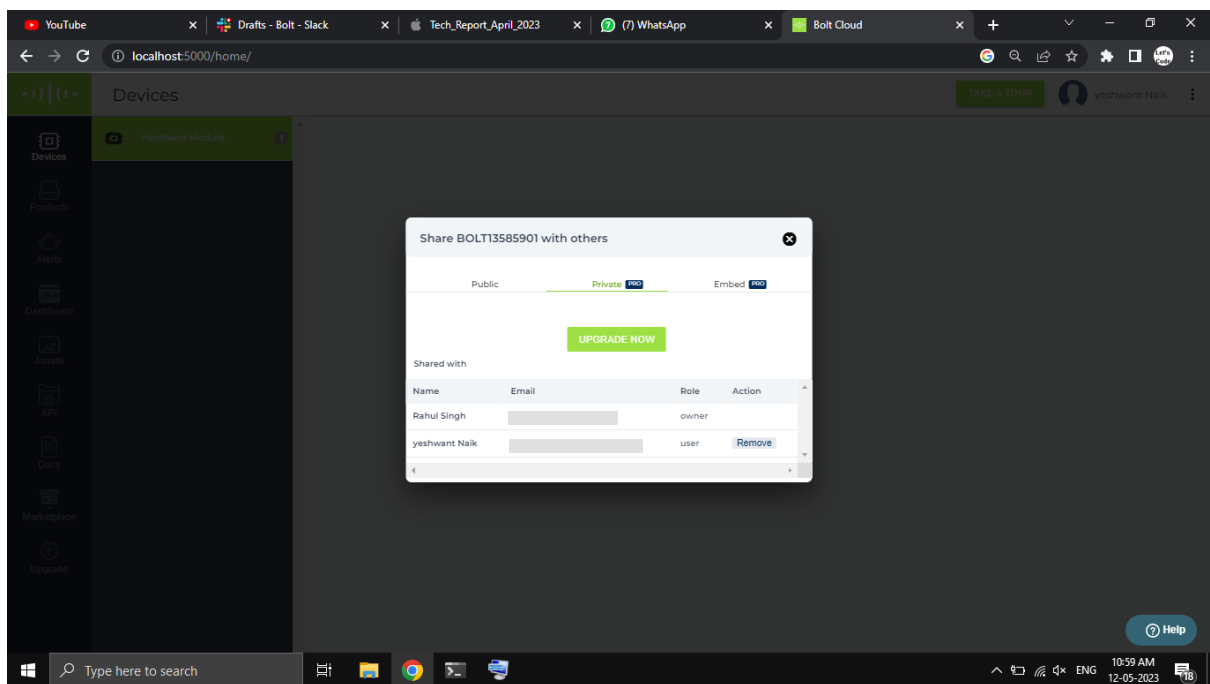
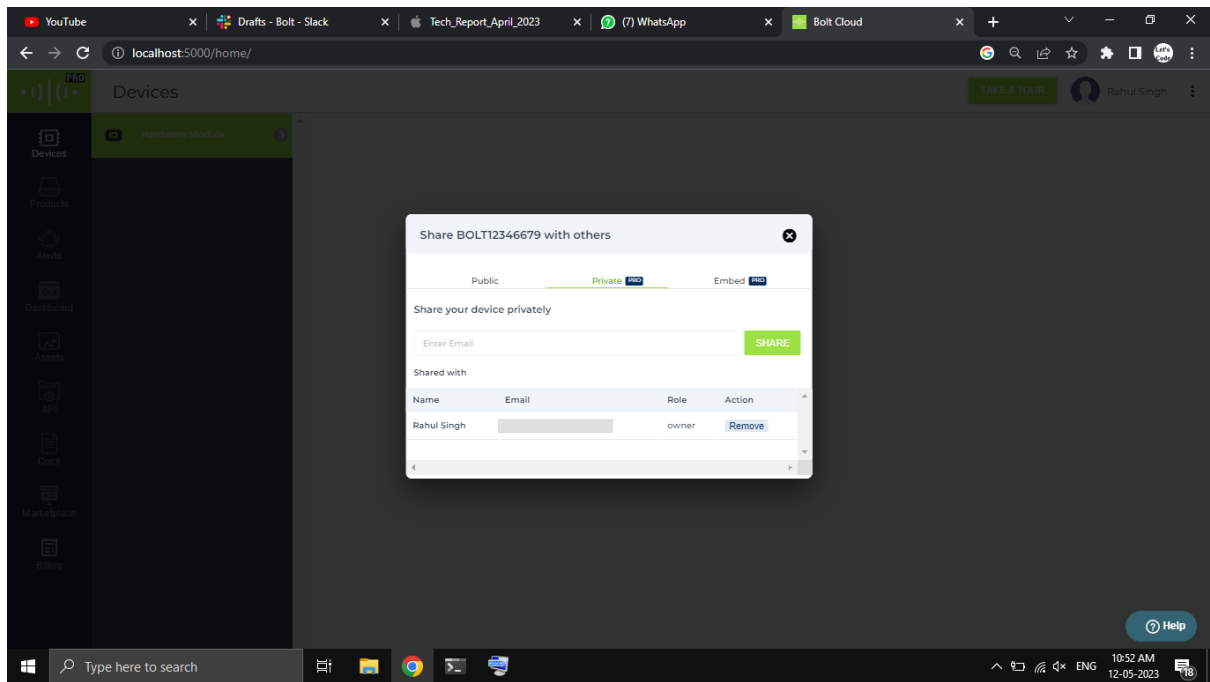






5. Fix for Shared device with list which doesn't take full height of parent div and the scrollbar also is not shown by default

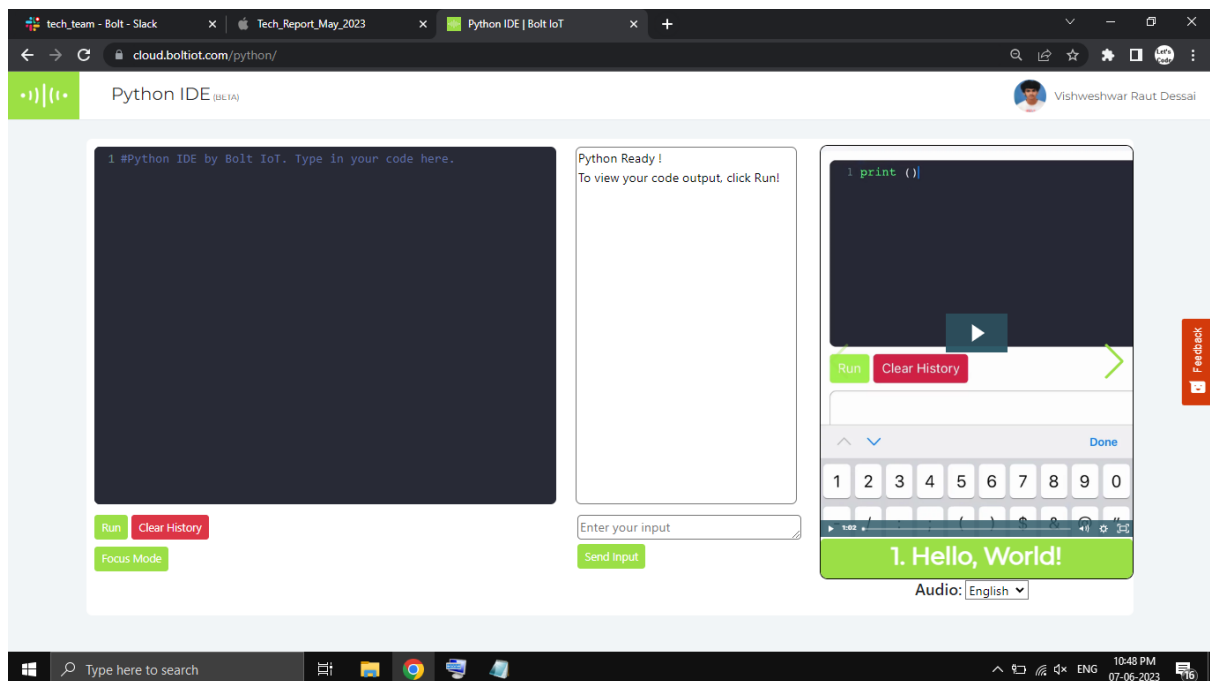




During 5th month of internship following tasks were carried out by me:

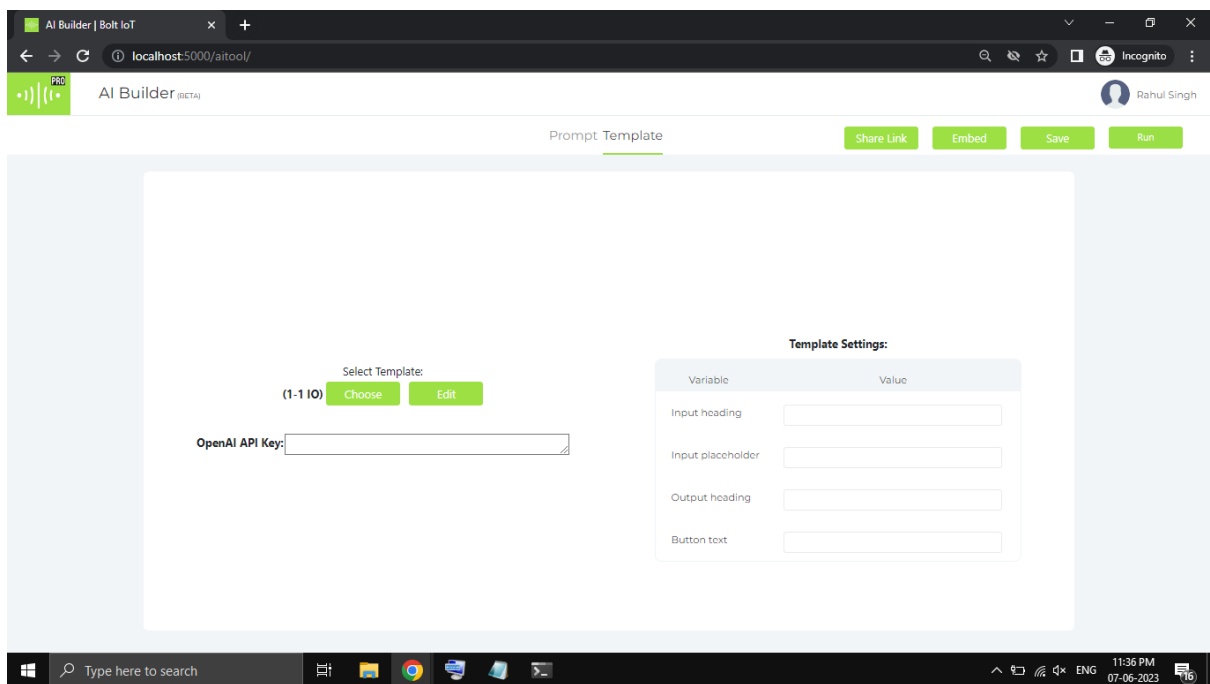
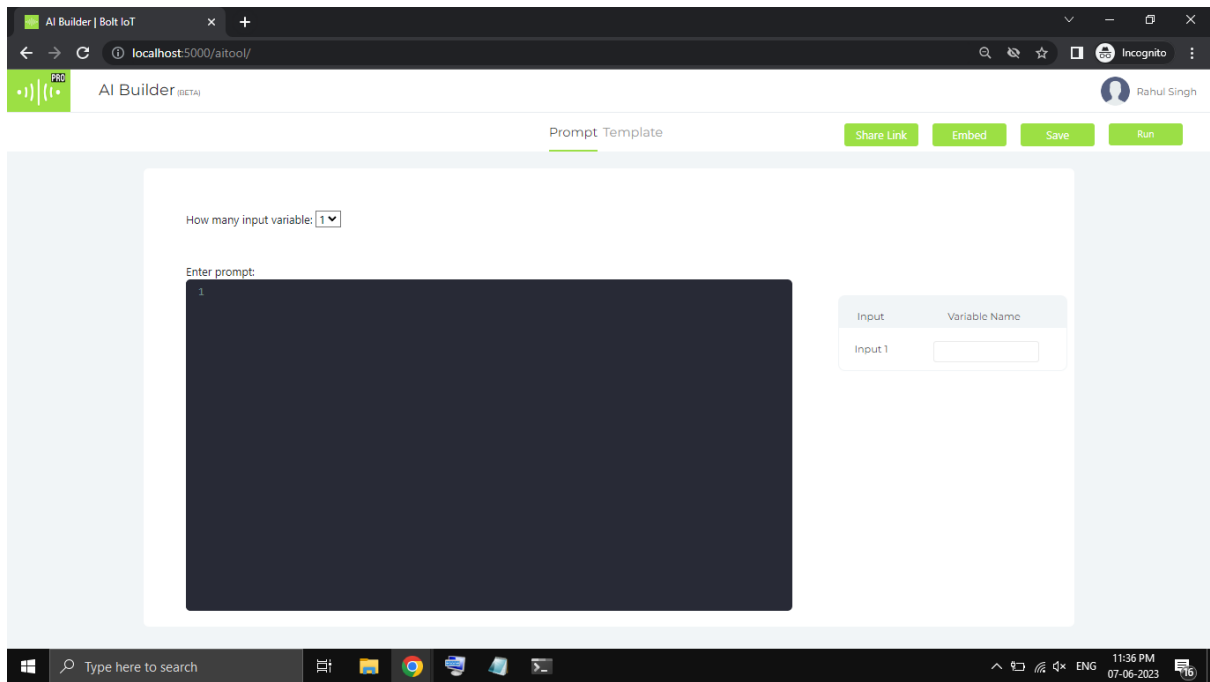
1. Updates to python IDE page to support more libraries.

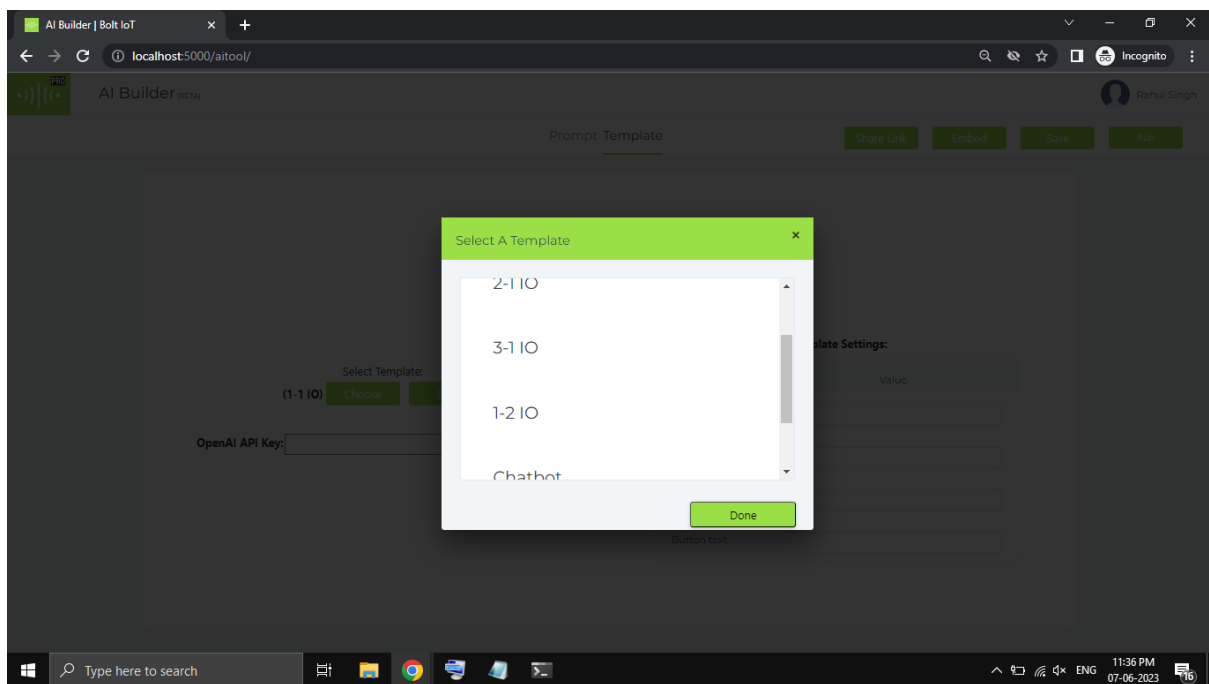
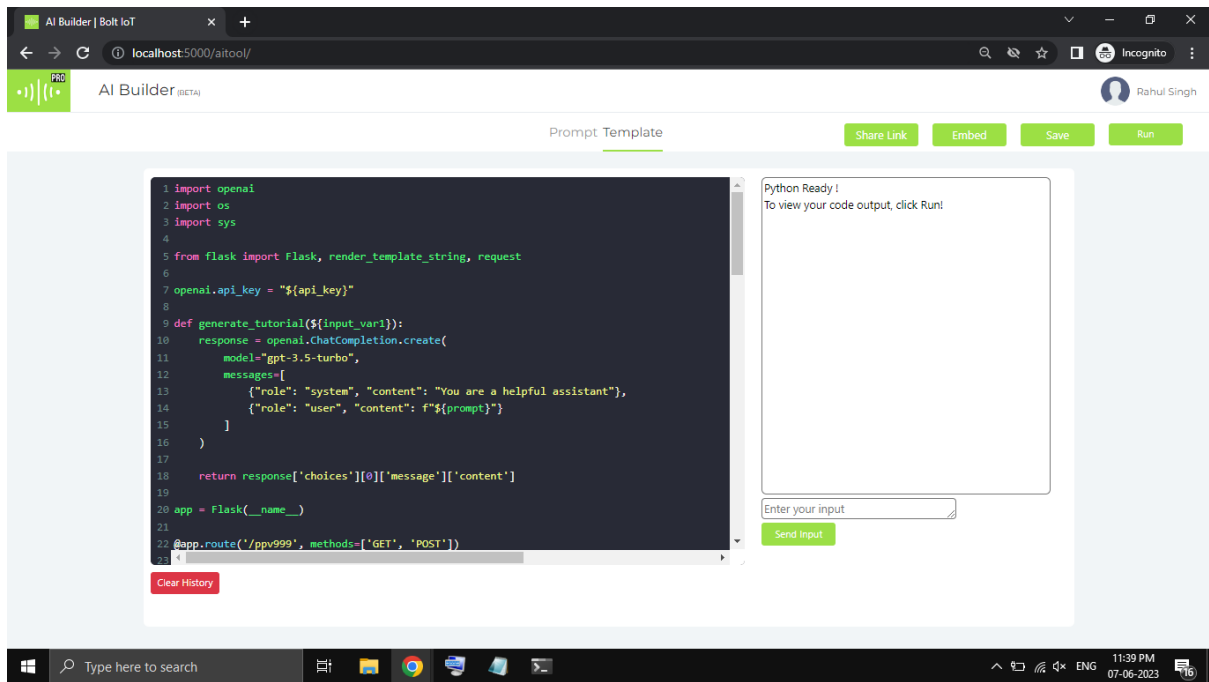
Also adding an input section to take inputs from user whenever prompt appears.



2. A new AI Tool page. The page is for the users to work on AI projects. The page has various AI project templates to choose from. The page has 2 sections

- a. Prompt: This is the prompt section where user can enter prompt and give values to variable names.
- b. Template: This is the section where user can choose template & edit code. Also can set values to variables. Variables & the variable numbers depend on the template.





3. Adding The AI training option in the discount link section
4. Adding a section Chat with us on WhatsApp in link generator page.

Tools and Technologies used



Python is a high-level, general-purpose programming language. Its design philosophy emphasizes code readability with the use of significant indentation via the off-side rule. Python is dynamically typed and garbage-collected.



MySQL is an open-source relational database management system (RDBMS) that is widely used for managing and storing structured data. It is a popular choice for web applications and is known for its scalability, reliability, and ease of use. MySQL uses the SQL (Structured Query Language) for querying, managing, and manipulating data.



Redis is an open-source, in-memory data structure store that is used as a database, cache, and message broker. It is designed for high performance, scalability, and simplicity. Redis stands for Remote Dictionary Server.



MongoDB is a popular open-source NoSQL document database that provides high scalability, flexibility, and performance for handling unstructured and semi-structured data. It belongs to the family of document-oriented databases, which means it stores and retrieves data in flexible, JSON-like documents.



Git is a distributed version control system (VCS) widely used for managing source code and tracking changes in software development projects. It allows multiple developers to collaborate on a project by providing a way to track and merge their changes efficiently.



Bitbucket is a web-based hosting service for Git and Mercurial version control systems. It provides a platform for developers to collaborate on code repositories, manage source code, and track changes in software projects. Bitbucket is widely used for both personal and team-based software development.



Sublime Text is a popular cross-platform text editor used for writing and editing code. It is known for its speed, versatility, and extensive customization options, making it a preferred choice for many developers and programmers.



Slack is a cloud-based collaboration platform and messaging app designed for teams and organizations. It provides a centralized hub for communication, collaboration, file sharing, and integration with various tools and services. Slack is commonly used in workplaces to enhance productivity, streamline communication, and foster teamwork.



Postman is a popular collaboration platform and API development tool that simplifies the process of designing, testing, documenting, and sharing APIs (Application Programming Interfaces). It provides a user-friendly interface and a range of features to facilitate API development and testing.

Internship timeline

January 2023

1. In-depth introduction by HR about company and products.
2. Completing IoT and ML training.
3. Setting up development environment for Bolt Cloud and Metrics App
4. Working on task –Revert the change for the Christmas logo.
5. Implementing a feature Linking and unlinking owner of device from metrics app
6. Implementing a fix for Scrolling bug on on dashboard feature.
7. Implementing a fix for Cloud Pro logo not shown correctly on training page.
8. Implementing a fix for Device name not shown on alerts page when device name is not set by the user.
9. Clearing slack messages everyday
10. Clearing Zendesk tickets everyday
11. Marking older Zendesk tickets as solved

February 2023

1. Working on Updates for Python IDE page.
 1. Make the default comment disappear whenever clicked on python editor if editor is empty.
 2. Make the default comment appear whenever clicked outside of python editor if the editor is empty
 2. Reduce the size of the video to add more elements
 3. pause background videos whenever switched to next or previous video
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March 2023

1. Implementing – If training certificate test taken or offer letter is given then don't allow refund
2. Implementing – Raise hotfix for alert.js PR
2. Working on task- Send alert notification in case user modifies the thresholds or alert conditions or other actions on the cloud to the owner account. Also block editing of thresholds for non admin users of device.
3. Clearing slack messages everyday
4. Clearing Zendesk tickets everyday
5. Marking older Zendesk tickets as solved

April 2023

1. Implementing Adding audio list in alerts page.
Also storing alert in db and also retrieving the saved alert when an alert is edited.
2. Implementing Blocking of WiFi disconnect button for non-admin(not owner of device) users
3. Implementing Adding confirmation before triggering OTA update
4. Implementing alerts feature frontend
 - a. highlighting the correct alert in the sidebar when user links/unlinks a device to an alert
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8. Marking older Zendesk tickets as solved

May 2023

1. Working on Updates to python IDE page
2. Implementing A new AI Tool page
3. Adding The AI training option in the discount link section
4. Implementing a section Chat with us on WhatsApp in link generator page
5. Clearing slack messages everyday
6. Clearing Zendesk tickets everyday
7. Marking older Zendesk tickets as solved

OVERALL EXPERIENCE AT INVENTROM PVT LTD-BOLT IOT

My experience at Bolt IoT as a web developer has been incredibly positive. I have had the opportunity to work on exciting projects and collaborate with a talented team. Throughout my time at Bolt IoT, I have seen significant improvement in my skills and abilities.

The work environment at Bolt IoT is conducive to growth and learning. I have been given the chance to take on new tasks and responsibilities, which has expanded my knowledge and experience in different areas. Working on these diverse tasks has broadened my skill set and provided valuable exposure to various technologies and development practices.

Moreover, the support and collaboration within the team have been exceptional. The encouragement and guidance I have received from my colleagues have been instrumental in my professional growth.

Overall, my experience at Bolt IoT as a web developer has been rewarding and fulfilling. I have witnessed significant improvements in my skills, particularly in debugging and problem-solving. The opportunity to work on diverse tasks has been both stimulating and enjoyable. I am grateful for the learning experiences and the supportive team that has contributed to my growth as a web developer.

REFERENCES

1. <https://slack.com/>
2. <https://www.boltiot.com/>
3. <https://bitbucket.org/>
4. <https://www.python.org/>
5. <https://redis.io/>
6. <https://www.postman.com/>
7. <https://www.mysql.com/>
8. <https://www.mongodb.com/>
9. <https://git-scm.com/>