

# Smart Home Asset Locator Project - Team Member Roles Summary

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It brings me great pleasure to deliver a one-page summary of our exceptional team members' duties and contributions to the Smart Home Asset Locator Project.

## 1) BLE Firmware Development (ESP32):

**Nikhil Kairamkonda, Team Lead – (25% contribution):** I developed BLE firmware for ESP32 modules to enable beacon functionality. BLE implementation, ensuring alignment with project objectives and coordinating tasks related to BLE functionality. Also facilitated coordination, led team meetings, and ensured effective communication. Conceptualizing the project idea based on triangulation method.

## 2) RSSI Signal Processing and Data Analysis:

**Nikhitha Sadanala - (20% contribution):** She worked on processing RSSI signals and implementing algorithms for accurate distance estimation. And also responsible for designing and implementing the hardware components required for asset tracking.

## 3) Alexa mobile app integration:

**Theshitha Vanga - (15% contribution):** She integrated Alexa mobile app to interact with ESP32 modules, vocalizing asset locations. Updated the code functionality with specific details of locations in the house like Sofa, Kitchen, Bedroom etc.,

## 4) Hardware Integration and Testing:

**Sujith Thanna - (15% contribution):** He has done initial set up and uploading the code to the hardware. He is also responsible for integrating ESP32 modules into the smart home environment and conducting hardware tests.

## 5) Quality Assurance and Troubleshooting:

**Samarsimha Reddy Kota - (15% contribution):** Ensured the system's reliability through quality assurance and addressed troubleshooting issues. His previous experience of Arduino eased our project work.

## 6) Documentation and Reporting:

**Chakradhar Vadlamudi - (10% contribution):** Documented the project progress, results, and prepared a comprehensive report.

**Overall Project Success:** The collaborative efforts of each team member led to the successful implementation of the smart home asset tracking system. The percentages represent an approximate distribution of contributions, recognizing the unique roles and skills brought by each team member.

I would like to thank Professor Dr. Sejun Song for providing the valuable guidance for the project achievement and progression.