Team Contributions: Rev 0
Audio360

Team #6, Six Sense
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Nirmal Chaudhari
Kalp Shah
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This document summarizes the contributions of each team member for the Rev 0 Demo. The time period of interest is the time between the PoC demo (November 20, 2025) and the Rev 0 demo (January 28, 2026); the contributions prior to the PoC are NOT included.

1 Demo Plans

The team will demonstrate the core features of Audio360 running directly on the microcontroller. This represents a major advancement from the proof of concept (POC), where these features were previously implemented and tested using a Python-based simulation environment, pyroomacoustics [1]. The features being presented include Direction of Arrival (DoA) estimation and audio classification. Both features now execute entirely on the microcontroller, which required implementation in embedded languages along with careful attention to memory usage and performance optimization.

The team has also upgraded the hardware with a new microphone array arrangement that matches the physical dimensions of the glasses. In addition, several improvements have been implemented that are not directly visible, including dynamic memory allocation for microphone data to improve efficiency and the development of serial communication protocols for transmitting direction and classification data to the glasses.

In addition, the team has received Rokid glasses and a compatible data cable that enables streaming output directly to the device. As a result, the team will present real-time visualization on the glasses themselves. The visualization receives direction and classification data from the microcontroller and displays the results on the glasses frame for selected sounds.

2 Team Meeting Attendance

Team meetings are held weekly starting the Winter semester to discuss progress updates, address blockers, and plan upcoming tasks. Team meetings were stopped after POC until the new year so that the team can focus on final exams. Snow days in second semester has forced the team to cancel meetings, however, teammates provided updates in our team channel.

Student	**Meetings**
Total	2
Omar Alam	2
Sathurshan Arulmohan	2
Nirmal Chaudhari	2
Kalp Shah	1
Jay Sharma	1

3 Supervisor/Stakeholder Meeting Attendance

Supervisor meetings were held only when expert guidance was required, minimizing the number of scheduled sessions.

Supervisor's Name: Dr. Martin v. Mohrenschildt

Student	Meetings
Total	1
Omar Alam	1
Sathurshan Arulmohan	1
Nirmal Chaudhari	1
Kalp Shah	1
Jay Sharma	1

4 Lecture Attendance

The team agreed that at least one member would attend each lecture and take notes, with Nirmal designated as the Note Taker. In cases where Nirmal was unable to attend, another team member served as a substitute. The team successfully ensured that at least one representative attended every lecture.

Student	Lectures
Total	1
Omar Alam	1
Sathurshan Arulmohan	0
Nirmal Chaudhari	1
Kalp Shah	0
Jay Sharma	0

5 TA Document Discussion Attendance

Due to the snow storm and McMaster closure, the only TA document discussion was cancelled.
TA's Name: Rashad Bhuiyan

Student	Lectures
Total	0
Omar Alam	0
Sathurshan Arulmohan	0
Nirmal Chaudhari	0
Kalp Shah	0
Jay Sharma	0

6 Commits

Commit data metrics date ranges from Novemeber 20, 2025 to January 28, 2026. The following command was used to extract this metric:
git shortlog -sne –since="20 Nov 2025" –before="28 Jan 2026"

Student	Commits	Percent
Total	141	100%
Omar Alam	39	27.7%
Sathurshan Arulmohan	72	51%
Nirmal Chaudhari	26	18.5%
Kalp Shah	0	0%
Jay Sharma	4	2.8%

- Kalp Shah was unable to contribute to development due to medical circumstances. Therefore, the number of commits attributed to him is zero. He communicated this situation to the team in advance, and Sathurshan implemented the Direction of Arrival feature in his place.
- Five of Sathurshan's commits correspond to work completed by Omar and Nirmal. These commits appear under Sathurshan's Github account because Omar and Nirmal performed debugging and testing on his laptop, which was already connected to the microcontroller.

7 Issue Tracker

Sathurshan has a higher number of authored issues, as it is the Leader's responsibility to create and assign tasks to team members for each milestone. This role distribution was agreed upon by the team, as outlined in the Development Plan document [2].

Student	Authored (O+C)	Assigned (C only)
Omar Alam	1	19
Sathurshan Arulmohan	46	37
Nirmal Chaudhari	3	7
Kalp Shah	0	2
Jay Sharma	0	4

8 CICD

Section **CI/CD** of the Development Document [2] describes the team's approach to implementing CI/CD for the project. At a high level, the CI/CD pipeline is used to automatically execute all team-developed tests, including unit and integration tests, and to build the source code using the target compiler. This process ensures that new code changes do not break or regress previously implemented functionality.

The following are all the CI github actions the team has.

1. Build source code using taget compiler.
2. Run unit and integration tests.
3. Source code static analyzer.
4. Build tex files upon changes.
5. Build Android app.

The only CD item is commiting pdf documents whenever there is a change. Code deployment is not possible due to limited hardware setup for the team.

9 Team Charter Trigger Items

There have been no team charter trigger items to date, and the team has made excellent progress on the project. The team is at a state where major features of the project are completed. The workload was temporarily adjusted due to the short-term absence of a team member, however, the member has since returned and the team will ensure that responsibilities are evenly distributed moving forward.

References

[1] fakufaku, "pyroomacoustics," 2025. [Online]. Available: https://pypi.org/project/pyroomacoustics/

[2] S. Arulmohan, O. Alam, K. Shah, J. Sharma, and N. Chaudri, "Development plan," 2025. [Online]. Available: https://github.com/Team6-SixSense/audio360/blob/main/docs/DevelopmentPlan/DevelopmentPlan.pdf