Senior Design - Milestone, Timeline and Effort Matrix

Team Members:
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Sabal Dahal

Milestones List

1. **Milestone 1 – Research Completed**
   Completion of literature review and selection of baseline deep learning model.

2. **Milestone 2 – ML Model Ready**
   Preprocessing, training, and refinement of deep learning model finished.

3. **Milestone 3 – Backend Implemented**
   Database schema, APIs, and authentication system operational.

4. **Milestone 4 – Frontend Implemented**
   UI design, monitoring features, and alert system completed.

5. **Milestone 5 – System Integration & Testing**
   ML, backend, and frontend integrated, with functional testing completed.

6. **Milestone 6 – Final Documentation & Demo**
   Submission of documentation, report, and final presentation.

Timeline Table

Task	Task Description	Responsible	Start Date	End Date	Milestone
1	Research DL models	Sabal	Oct 7, 2025	Oct 31, 2025	M1
2	Collect / preprocess images	Sabal	Oct 7, 2025	Nov 15, 2025	M2
3	Design ML training pipeline	Sabal	Oct 20, 2025	Nov 10, 2025	M2

4	Train / evaluate baseline model	Sabal	Nov 11, 2025	Dec 1, 2025	M2
5	Refine model architecture	Sabal	Dec 2, 2025	Dec 15, 2025	M2
6	Specify database schema	Aayush	Nov 10, 2025	Nov 20, 2025	M3
7	Develop backend API	Aayush	Nov 21, 2025	Dec 15, 2025	M3
8	Integrate ML with backend	Aayush	Jan 5, 2026	Jan 20, 2026	M3
9	Implement authentication	Aayush	Jan 5, 2026	Jan 20, 2026	M3
10	Test backend modules	Aayush	Jan 21, 2026	Jan 31, 2026	M3
11	Design dashboard UI	Saugat	Nov 21, 2025	Dec 15, 2025	M4
12	Develop monitoring features	Saugat	Jan 5, 2026	Jan 25, 2026	M4
13	Implement alerts / notifications	Saugat	Jan 26, 2026	Feb 10, 2026	M4
14	Validate UI/UX	Saugat	Feb 11, 2026	Feb 20, 2026	M4
15	Document frontend code	Saugat	Feb 21, 2026	Feb 28, 2026	M4
16	Integrate subsystems	Team	Mar 1, 2026	Mar 10, 2026	M5

17	Conduct system-wide testing	Team	Mar 11, 2026	Mar 20, 2026	M5
18	Evaluate performance / refine	Team	Mar 11, 2026	Mar 20, 2026	M5
19	Prepare project documentation	Team	Mar 21, 2026	Mar 28, 2026	M6
20	Final demo	Team	Apr 1, 2026	Apr 5, 2026	M6

Task #	Task Description	Sabal (%)	Aayush (%)	Saugat (%)
1	Research DL models	70.0	15.0	15.0
2	Collect / preprocess images	70.0	15.0	15.0
3	Design ML training pipeline	70.0	15.0	15.0
4	Train / evaluate baseline model	70.0	15.0	15.0
5	Refine model architecture	70.0	15.0	15.0
6	Specify database schema	15.0	70.0	15.0
7	Develop backend API	15.0	70.0	15.0
8	Integrate ML with backend	15.0	70.0	15.0
9	Implement authentication	15.0	70.0	15.0
10	Test backend modules	15.0	70.0	15.0
11	Design dashboard UI	15.0	15.0	70.0
12	Develop monitoring features	15.0	15.0	70.0
13	Implement alerts / notifications	15.0	15.0	70.0
14	Validate UI/UX	15.0	15.0	70.0
15	Document frontend code	15.0	15.0	70.0
16	Integrate subsystems	33.3	33.3	33.3
17	Conduct system-wide testing	33.3	33.3	33.3
18	Evaluate performance / refine	33.3	33.3	33.3

| 19 | Prepare project documentation | 33.3 | 33.3 | 33.3 |
| 20 | Present final demo | 33.3 | 33.3 | 33.3 |