

Comparative Report: Expected vs. Real Timeline

Phase 1: Planning & Background Research

Expected:

- Brainstorming, scope definition, and project management plan (03/20–03/26)
- Literature review and report writing (03/25–04/02)

Actual:

- Initial tasks delayed; scope/objectives and literature review were only fully addressed by 04/03, later than expected.
- The team did not engage with the project during the first week due to semester start.

Deviation: Early delay of about one week in completing basic setup and literature review.

Phase 2: Initial Setup & Experiments

Expected:

- Hardware setup (04/04–04/15)
- Dataset preparation (04/16–04/30)
- Baseline ML models (05/01–05/30)
- Iterative testing on PC (06/02–07/04)
- Deployment on Raspberry Pi with optimization (06/13–07/17)

Actual:

- Hardware setup phase (04/04–04/15) was skipped entirely.
- Dataset and environment setup delayed, with failed attempts at first (04/16–04/30).
- Baseline CNN created in May but with poor accuracy.
- Iterative testing (06/02–07/04) focused only on experiments, skipping documentation and bottleneck analysis.
- Deployment on Raspberry Pi occurred without optimization; later augmented with YOLO, diverging from the original plan.

Deviation: Hardware setup was missed, dataset preparation was incomplete, and model testing did not follow the structured documentation process. However, experimentation led to unexpected improvements (YOLO integration).

Phase 3: Presentation & Poster Preparation

Expected:

- Edge case testing, robustness improvement, and final preparation (07/28–08/29)

Actual:

- Split focus: one member optimized static model, another explored dynamic gesture recognition.
- Custom images collected, attempted LSTM (failed), later explored WLASL dataset.
- Work extended beyond planned end date, with extra timeframes into September and October, introducing transformer models and even a dual-language (ASL + BSL) system.

Deviation: Project extended nearly two months past original plan, with scope expanded into new research directions not anticipated in the expected timeline.

Overall Findings

1. **Delays in Early Stages** – Planning and setup phases were not followed strictly, leading to cascading delays.
 2. **Missed/Shifted Tasks** – Hardware setup, structured documentation, and optimization timelines were not met.
 3. **Scope Expansion** – While the expected plan focused on a structured pipeline, the real timeline diverged into additional experiments (YOLO, LSTM, transformers, multi-language models).
 4. **Extended Timeline** – Work continued until mid-October, well beyond the original end in late August.
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Conclusion

The project did **not strictly follow the expected timeline**. Early delays caused missed deadlines in hardware setup and dataset preparation. However, the real timeline also shows **valuable deviations**, such as incorporating YOLO, transformer models, and dual-language systems, which ultimately broadened the project's scope and improved performance beyond the original plan.