

Development Plan

Phase	Duration	Deliverables
MVP (Weeks 1–4)	1 Month	Real-time multimodal demo with speech→vision→LLM feedback
Alpha (Month 2 & 3)	2 Months	Unified MCP API hub + cross-team integration
Beta (Month 4 & 5)	2 Months	Domain apps + video support + edge optimization
Production (Month 6)	1 Month	Secure deployment, monitoring, and full documentation

Team-1 Dev Plan

Team 1

Title/Description	Priority (1-5)	Size Estimate (Points)	Assigned To	Effort Estimate (Developer Days)
Phase 1				
Set up MCP server with FastAPI Integration	5	10	Tanner	1
Implement Basic STT with Whisper integration	4	12	Tanner	4
Create simple TTS pipeline with Coqui TTS	3	8	Michael	4
Build LLM abstraction layer for model switching	3	12	Michael	5
Phase 2				
Add streaming capabilities for real-time processing	3	10	Tanner	5
Implement audio preprocessing and enhancement	2	7	Michael	3
Build comprehensive API documentation and testing	4	13	Michael	6
Add speaker diarization and audio intelligence features	2	6	Tanner	4

TEAM-2 Dev Plan

TEAM-2

Name/Description	Priority (/5)	Size Estimate (Points)	Assigned To	Effort Estimate (Developer Days)
Phase 1				
Set up MCP server	5	10	Arscene	1
Implement OCR	1	4	Arscene	1
Configure computer vision(small vision language model) with MCP	4	8	Merci	1
Phase 2				
Create LLM switching endpoint	1	4	Arscene	1
Build image preprocessing and enhancement pipeline	4	8	Merci	3

Team-3 Dev Plan

Team 3

Title/Description	Priority (1-5)	Size Estimate (Points)	Assigned To	Effort Estimate (Developer Days)
Phase 1				
Set up MCP server with YOLOv9/v10 integration	5	10	Zaid	6
Implement high-accuracy object detection pipeline	5	12	Zaid	8
Build real-time inference with GPU acceleration	5	10	Zaid	6
Create basic classification layer with confidence scoring	4	6	Zaid	4
Phase 2				
Add specialized models (SAM for segmentation, DINO for zero-shot)	5	11	Zaid	7
Implement video tracking with temporal consistency	5	11	Zaid	7
Build LLM integration for scene understanding and reasoning	5	9	Zaid	6
Create custom training pipeline for domain-specific objects	4	8	Zaid	6

Team-4 Dev Plan

Team-4

Title / Description	Priority (1–5)	Size Estimate (Points)	Assigned To	Effort Estimate (Developer Days)
Set up MCP server with SAM 2.0 and SegFormer integration	5	13	Emmanuel	8
Implement high-accuracy semantic segmentation pipeline	5	15	Hayden	10
Build depth estimation with MiDaS integration	5	13	Emmanuel	8
Create basic spatial relationship analysis	4	8	Hayden	6
Validation and testing of all Phase 1 modules	5	8	Emmanuel	6
Checkpoint: Integration milestone and Phase 1 review	5	5	ALL	4

Title / Description	Priority (1–5)	Size Estimate (Points)	Assigned To	Effort Estimate (Developer Days)
Add 3D scene reconstruction and point cloud processing	5	13	Hayden	8
Implement room layout understanding and floor plan generation	5	13	Emmanuel	8
Build LLM integration for spatial reasoning and queries	5	10	Hayden	7
Create panoptic segmentation with instance tracking	4	10	Hayden	7
Validation and testing of all Phase 2 modules	5	8	ALL	6