

Phase	Task	Start Date	End Date	Status
Phase 1: Requirements & Planning	Project charter and scope definition	9/20/2025	11/4/2025	Completed
	Stakeholder analysis and requirements gathering	9/20/2025	10/30/2025	Completed
	Feasibility study and risk assessment	1/13/2025	1/24/2025	Completed
	Architecture and design specification	9/20/2025	9/30/2025	Completed
	Resource planning and budget allocation	9/20/2025	9/30/2025	Completed
	Collect and aggregate network traffic data	11/5/2025	11/5/2025	Completed
Phase 2: Data Preparation & Exploration	Data labeling and annotation	12/13/2025	12/20/2025	In Progress
	Exploratory data analysis (EDA)	12/13/2025	12/20/2025	In Progress
	Feature engineering and selection	1/2/2026	1/31/2026	Pending
	Data preprocessing and normalization	1/2/2026	1/31/2026	Pending
Phase 3: Model Development	Baseline model implementation (Traditional ML)	1/10/2026	1/31/2026	Pending
	Deep learning model design (LSTM/CNN)	1/10/2026	1/31/2026	Pending
	Ensemble model creation	1/15/2026	1/31/2026	Pending
	Model training and validation	1/20/2026	1/31/2026	Pending
	Hyperparameter tuning and optimization	1/25/2026	1/31/2026	Pending
Phase 4: Testing & Evaluation	Model evaluation on test dataset	2/1/2026	2/10/2026	Pending
	Adversarial robustness testing	2/1/2026	2/10/2026	Pending
	Performance benchmarking and comparison	2/11/2026	2/20/2026	Pending
	Security testing and vulnerability assessment	2/21/2026	2/28/2026	Pending
Phase 5: Deployment & Integration	Containerization (Docker/Kubernetes setup)	2/25/2026	2/28/2026	Pending
	Integration with network monitoring tools	3/1/2026	3/5/2026	Pending
	Staging environment deployment	3/4/2026	3/8/2026	Pending
	User acceptance testing (UAT)	3/8/2026	3/15/2026	Pending
	Production deployment and monitoring	3/15/2026	3/21/2026	Pending
Phase 6: Documentation & Handover	Technical documentation and API guide	3/22/2026	3/31/2026	Pending
	User manual and operational guide	4/1/2026	4/8/2026	Pending
	Training and knowledge transfer	4/8/2026	4/25/2026	Pending
	Project closure and lessons learned	4/25/2026	4/30/2026	Pending