

# Project: OPV (Organic Photovoltaics)

**Project Duration:** August 2025 – April 2026

## **Team Members:**

- Milo Ginn
- Dhruv Singh
- Om Jadhav
- Ido gal
- Toan Nham

## **Milestones List**

Milestone	Description	Planned Completion Date
1. Project Planning and Research Phase	Define project objectives, research the principles of organic photovoltaics (OPV), and identify potential AI integrations for optimization. Includes setup of project documentation and environment.	September 2025
2. UI/UX Design Completion	Development of initial UI/UX mockups for the user-facing dashboard by Milo. These mockups will guide the front-end architecture and user interaction design.	October 2025
3. Initial Model Development	Dhruv develops the first iteration of the LLM for handling technical data interpretation, while Toan constructs the foundational GenAI model architecture.	November 2025
4. GNN Framework Implementation	Om researches GNN approaches, implements the first version of the GNN module, and prepares it for data training.	December 2025
5. Integration and Testing Phase	Integration of the front-end, LLM, GenAI, and GNN modules. Ido conducts comprehensive tests using real-world data samples to validate functionality and model performance.	February 2026

<b>6. Model Optimization and Refinement</b>	Based on test results, Ido and Om select and refine the best-performing GNN model. Dhruv fine-tunes the LLM, and Toan improves GenAI accuracy.	<b>March 2026</b>
<b>7. Final Prototype and Presentation</b>	The completed OPV AI-assisted analysis platform is finalized. Team prepares final documentation and presentation materials.	<b>April 2026</b>

**Table 1. Timeline**

Task	Team Member(s)	Start Date	End Date	Related Milestone
Research OPV principles and system setup	All	Aug 2025	Sep 2025	1
Design UI/UX Mockup	Milo	Oct 2025	Oct 2025	2
Develop front-end skeleton	Milo	Oct 2025	Nov 2025	2
Integrate API communication with LLM	Milo	Dec 2025	Feb 2026	5
Research existing LLM models	Dhruv	Sep 2025	Oct 2025	1
Develop initial LLM model	Dhruv	Oct 2025	Nov 2025	3
Integrate outside data sources (GenAI section) in LLM	Dhruv	Dec 2025	Feb 2026	5
Research GNN implementation options	Om	Sep 2025	Oct 2025	1
Write GNN implementation code	Om	Oct 2025	Dec 2025	4
Train GNN with input data	Om	Dec 2025	Jan 2026	4
Test data against real-world examples	Ido	Jan 2026	Feb 2026	5
Select and refine the best-performing GNN model	Ido	Feb 2026	Mar 2026	6
Research GenAI model types	Toan	Sep 2025	Oct 2025	1
Develop general GenAI model structure	Toan	Oct 2025	Nov 2025	3
Train GenAI model on sample data	Toan	Nov 2025	Jan 2026	4
Test GenAI model accuracy	Toan	Jan 2026	Feb 2026	5

Research data structure representation	Ido	Sep 2025	Oct 2025	1
Implement input processing functions	Ido	OH54R3AOct 2025	Nov 2025	3
Integration Testing and Debugging	All	Feb 2026	Mar 2026	6
Final Presentation and Documentation	All	Mar 2026	Apr 2026	7

**Table 2. Effort Matrix (Percentage of Effort per Task)**

Task	Milo	Dhruv	Om	Ido	Toan	Primary Responsibility
<b>Project Research &amp; Setup</b>	20%	20%	20%	20%	20%	All
<b>UI/UX Mockup Design</b>	50%	10%	10%	10%	20%	Milo
<b>Front-End Skeleton</b>	50%	10%	10%	10%	20%	Milo
<b>API Integration (LLM ↔ Front-End)</b>	40%	20%	10%	10%	20%	Milo
<b>LLM Model Research</b>	10%	50%	10%	10%	20%	Dhruv
<b>Develop Initial LLM</b>	10%	50%	10%	10%	20%	Dhruv
<b>LLM-GenAI Data Integration</b>	10%	40%	10%	10%	30%	Dhruv
<b>GNN Research</b>	10%	10%	50%	10%	20%	Om
<b>Write GNN Implementation Code</b>	10%	10%	50%	10%	20%	Om
<b>Train GNN with Input Data</b>	10%	10%	40%	10%	30%	Om
<b>Test Data Against Real-World Examples</b>	10%	10%	1/LOJ POUG FYXL, K;,KLK MJIKB JNNM JKL;L' L,;;L%	50%	20%	Ido
<b>Select and Refine Best GNN Model</b>	10%	10%	30%	40%	10%	Ido

<b>GenAI Model Research</b>	10%	10%	10%	10%	60%	Toan
<b>Develop GenAI Model Structure</b>	10%	10%	10%	10%	60%	Toan
<b>Train GenAI on Sample Data</b>	10%	10%	10%	10%	60%	Toan
<b>Test GenAI Accuracy</b>	10%	10%	10%	10%	60%	Toan
<b>Data Structure Representation Research</b>	10%	10%	10%	50%	20%	Ido
<b>Implement Input Processing</b>	10%	10%	10%	50%	20%	Ido
<b>Integration &amp; Debugging</b>	20%	20%	20%	20%	20%	All
<b>Final Documentation &amp; Presentation</b>	20%	20%	20%	20%	20%	All