# Project Initialization and Planning Phase

|  |  |
| --- | --- |
| **Date** | 14 June 2025 |
| **Team ID** | SWTID1749876754 |
| **Project Name** | SynapseScan – AI Driven Classification of Ovarian Cancer Variants |
| **Maximum Marks** | 3 Marks |

## Problem Statement:

Ovarian cancer diagnosis poses critical challenges in early detection, personalized treatment, and research progression. Patients often face delays in diagnosis due to subtle, hard-to-detect variants. Additionally, oncologists require accurate classification of these variants to personalize treatments effectively. Researchers also struggle with time-consuming manual classification of large datasets. SynapseScan addresses these pain points by leveraging transfer learning and AI-driven classification techniques. By automating and enhancing the identification of ovarian cancer variants from medical imaging data, this project empowers early detection, facilitates tailored treatment plans based on individual genetic profiles, and accelerates oncology research. Through this initiative, we aim to improve diagnostic accuracy, optimize treatment efficacy, and speed up scientific discoveries in the field of ovarian cancer.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Problem Statement (PS)** | **I am (Customer)** | **I’m trying to** | **But** | **Because** | **Which makes me feel** |
| PS-1 | A patient at risk of ovarian cancer | Get diagnosed at an early stage | The symptoms and variants are hard to identify | Ovarian cancer presents subtle, complex patterns | Worried and uncertain about timely diagnosis |
| PS-2 | An oncologist | Create personalized treatment plans | Variant classification is inconsistent | Manual processes lack precision and are time-consuming | Frustrated and limited in treatment optimization |
| PS-3 | A cancer researcher | Analyze large datasets to discover patterns | Manual classification is slow | Ovarian cancer data is complex and vast | Restricted in research productivity |