

# Project Initialization and Planning Phase

## Project Overview

Objective	To predict garment worker productivity using machine learning to improve efficiency and resource allocation.
Scope	The project evaluates various factors affecting worker productivity and uses ML models (Linear Regression, Random Forest, XGBoost) for prediction.

## Problem Statement

Description	The garment industry often faces unpredictable productivity levels, impacting deadlines and resource planning.
Impact	Predicting productivity helps in better planning, reduced delays, and improved overall efficiency.

## Proposed Solution

Approach	Using historical productivity data, preprocess it, and train multiple ML models to find the best performing one.
Key Features	- Multiple model comparison - Flask-based web app for predictions

## Resource Requirements

Hardware	T4 GPU, 8GB RAM, 1TB SSD
Software	Python, Flask, scikit-learn, pandas, numpy, matplotlib, seaborn, Jupyter Notebook
Data	garments_worker_productivity.csv