

Student Project - Django Web Application

This project is a Django-based web application designed to show my profile publically and is containerized using Docker with a CI/CD pipeline managed via Jenkins.

✈ Table of Contents

- [Project Overview](#)
- [Features](#)
- [Installation](#)
- [Usage](#)
- [Docker Integration](#)
- [Jenkins CI/CD Pipeline](#)

🚀 Project Overview

This Django web application manages student records, including personal details, academic progress, and administrative functionalities. It is structured into different apps, each responsible for a specific module.

🔧 Technologies Used:

- **Programming Language:** Python (Django Framework)
 - **Containerization:** Docker
 - **CI/CD Pipeline:** Jenkins
 - **Version Control:** Git & GitHub
-

✂ Installation

Follow these steps to set up the project locally:

1. **Clone the Repository**
2. `git clone https://github.com/SRCM-AIML/C04_Atharva-Tembhurnikar_Assignment-2.git`
3. `cd C04_Atharva-Tembhurnikar_Assignment-2`

✂ Set Up a Virtual Environment (Recommended)

```
python -m venv venv
source venv/bin/activate # On Windows use venv\Scripts\activate
```

📦 Install Dependencies

```
pip install -r requirements.txt
```

🔗 Apply Database Migrations

```
python manage.py migrate
```

🚀 Run the Development Server

```
python manage.py runserver
```

🔗 Access the application at <http://127.0.0.1:8000/>.

🐳 Docker Integration

To run the project using **Docker**:

◆ Build the Docker Image

```
docker build -t studentproject .
```

◆ Run the Container

```
docker run -p 8000:8000 studentproject
```

🔗 Jenkins CI/CD Pipeline

This project is configured for **Continuous Integration and Deployment** using **Jenkins**.

✂ Steps to Set Up Jenkins:

1. **Install Jenkins** and required plugins:
 - **Pipeline**
 - **Docker Pipeline**
2. **Create a Jenkins Pipeline** and connect it to this repository.
3. **Run the Pipeline** to **build, test, and deploy** the application.