

# **AI-POWERED ADAPTIVE LEARNING PLATFORM - COMPLETE SETUP GUIDE TO RUN THE PROJECT**

## **PREREQUISITES**

Before starting, ensure you have:

- Python 3.8 or higher installed
- At least 8GB of RAM
- Stable internet connection (for initial model downloads)
- 5GB free disk space

## **STEP BY STEP INSTALLATION**

### **Step 1: Download and Organize Files**

#### **1.Create a project folder:**

```
mkdir ai_learning_platform
```

```
cd ai_learning_platform
```

#### **2.Save all your Python files in this folder:**

- main\_app.py
- story\_processing.py
- textbook\_conversion.py
- flashcard\_generator.py

### **Step 2: Create an Virtual Environment**

```
python -m venv ai_learning_env
```

```
ai_learning_env\Scripts\activate
```

### **Step 3: Create an Requirements.file**

Create requirements.txt with this content:

```
streamlit>=1.28.0
```

```
nltk>=3.8
```

```
transformers>=4.21.0
```

```
torch>=1.12.0
```

PyMuPDF>=1.23.0

pandas>=1.5.0

plotly>=5.15.0

networkx>=2.8

matplotlib>=3.5.0

Pillow>=9.2.0

scikit-learn>=1.1.0

#### **Step 4: Install Dependencies**

# Install all packages

pip install -r requirements.txt

# If PyTorch installation fails, try:

pip install torch torchvision torchaudio --index-url <https://download.pytorch.org/whl/cpu>

#### **Step 5: Test Installation**

Run this test to check if everything is installed correctly:

```
python -c "import streamlit, nltk, transformers, torch, fitz; print('All packages installed successfully!')"
```

#### **Step 6: Running the Application**

##### **Simple Run**

```
streamlit run main_app.py
```

##### **Custom part**

```
streamlit run main.py --server.port 8502
```

#### **Step 7: Accessing the Application**

##### **1. Local Access:**

- Open browser and go to: <http://localhost:8501>

##### **2. Network Access:**

- Other devices on same network: [http://YOUR\\_IP:8501](http://YOUR_IP:8501)

## **Step 8:Using The Application**

### **First Time Setup**

1. Launch: Application opens in browser
2. Wait: Initial setup downloads NLTK data (~30 seconds)
3. Models: AI models download on first use (~2-5 minutes)

### **Navigation**

- Sidebar: Choose between three modules
- File Upload: Upload PDF documents
- Interactive Features: Follow on-screen instructions

### **Module Features**

#### **1. Interactive Edu Module:**

- Upload PDF → Extract text
- Interactive slides with animations
- Visual content presentation

#### **2. Textbook Conversion Module:**

- PDF → Summary + Keywords + Mind maps
- Interactive Q&A system
- Topic visualization

#### **3. Flashcard Generator Module:**

- Auto-generate quiz questions from PDF
- Interactive multiple-choice interface
- Progress tracking and scoring

### **Quick Restart Commands**

# Stop: Ctrl + C

# Restart:

streamlit run main.py