

User Guide – AI Study & Productivity Assistant

CMSC 495 User Guide

AI Study & Productivity Assistant

Course: CMSC 495 – Capstone Project

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Date: February 21, 2026

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1. Introduction

The **AI Study & Productivity Assistant** is a web-based academic management application designed to help college students organize coursework, manage deadlines, track progress, and receive AI-powered academic assistance.

The system combines:

- Secure user authentication
- Assignment management tools
- Progress analytics
- AI-generated study plans
- AI-generated summaries

This User Guide provides step-by-step instructions for installing, launching, and using the application effectively.

2. System Overview

The AI Study & Productivity Assistant is built using:

- Python (Flask framework)
- SQLAlchemy (database ORM)
- SQLite (local database)
- Hugging Face AI API (optional AI integration)
- HTML/CSS/JavaScript frontend

The system operates locally on the user's computer and runs through a web browser at:

`http://127.0.0.1:5000`

All user data is securely stored in a local database file.

3. System Requirements

Before running the application, ensure the following requirements are met:

Required Software

- Python 3.9 or higher
- Git (to clone repository)
- Internet connection (for AI features)
- Modern web browser (Chrome, Firefox, Edge)

Supported Operating Systems

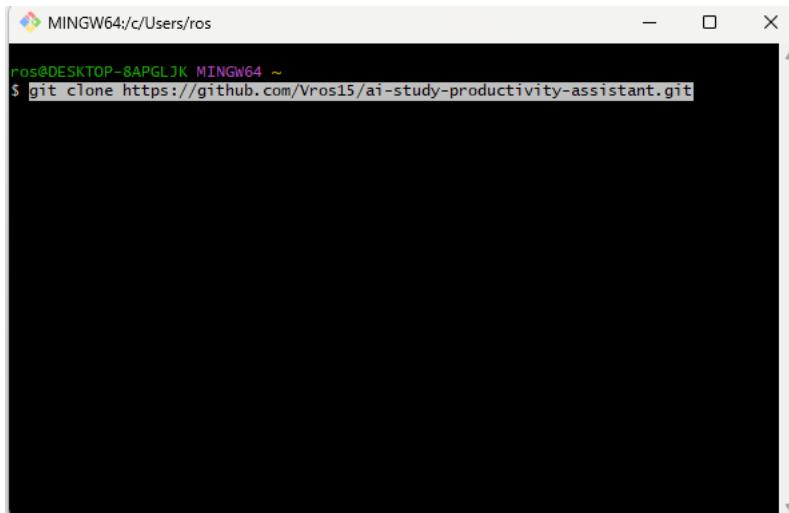
- Windows 10 or later
- macOS
- Linux

4. Installation and Setup

Step 1: Clone the Repository

Open Command Prompt or Git Bash and enter:

```
git clone https://github.com/Vros15/ai-study-productivity-assistant.git
```



This downloads the application to your computer.

5. Launching the Application (Windows Users)

The project includes an automated startup script to simplify setup.

Step 1: Locate the Project Folder

Open the folder where the repository was cloned.

Step 2: Run the Startup Script

Double-click:

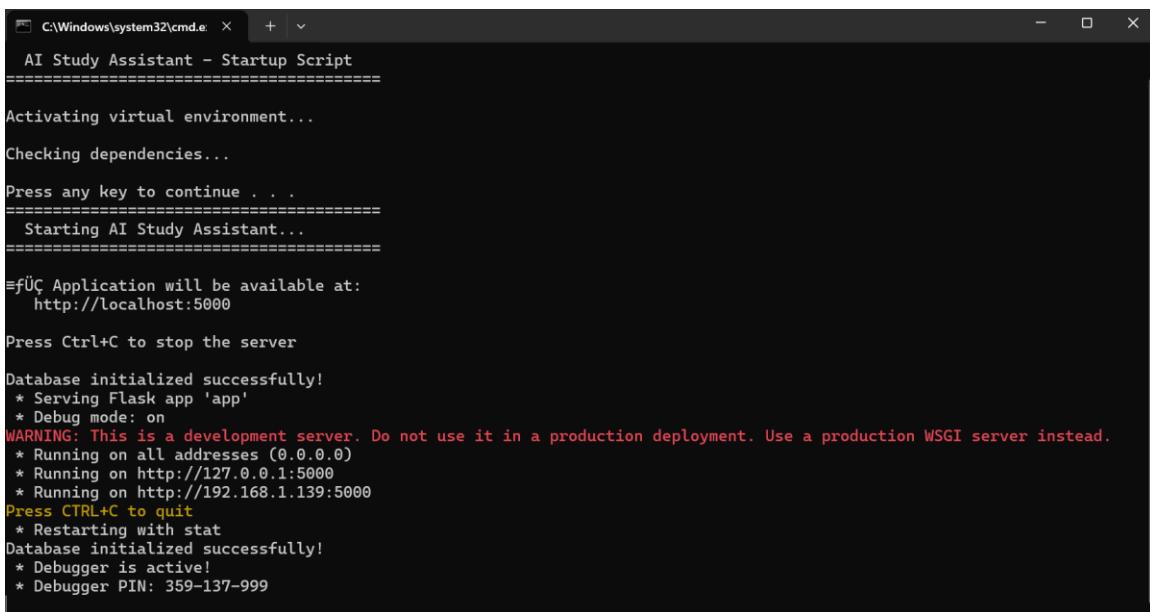


The script will automatically:

- Create a virtual environment (if not already created)

- Install required dependencies
- Create a .env file if missing
- Initialize the database
- Launch the Flask server

Figure 1 – Application Startup Screen



```
C:\Windows\system32\cmd.exe x + v
=====
AI Study Assistant - Startup Script
=====
Activating virtual environment...
Checking dependencies...
Press any key to continue . . .
=====
Starting AI Study Assistant...
=====
Application will be available at:
http://localhost:5000
Press Ctrl+C to stop the server
Database initialized successfully!
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://192.168.1.139:5000
Press CTRL+C to quit
* Restarting with stat
Database initialized successfully!
* Debugger is active!
* Debugger PIN: 359-137-999
```

When the application starts successfully, you will see:

Running on http://127.0.0.1:5000

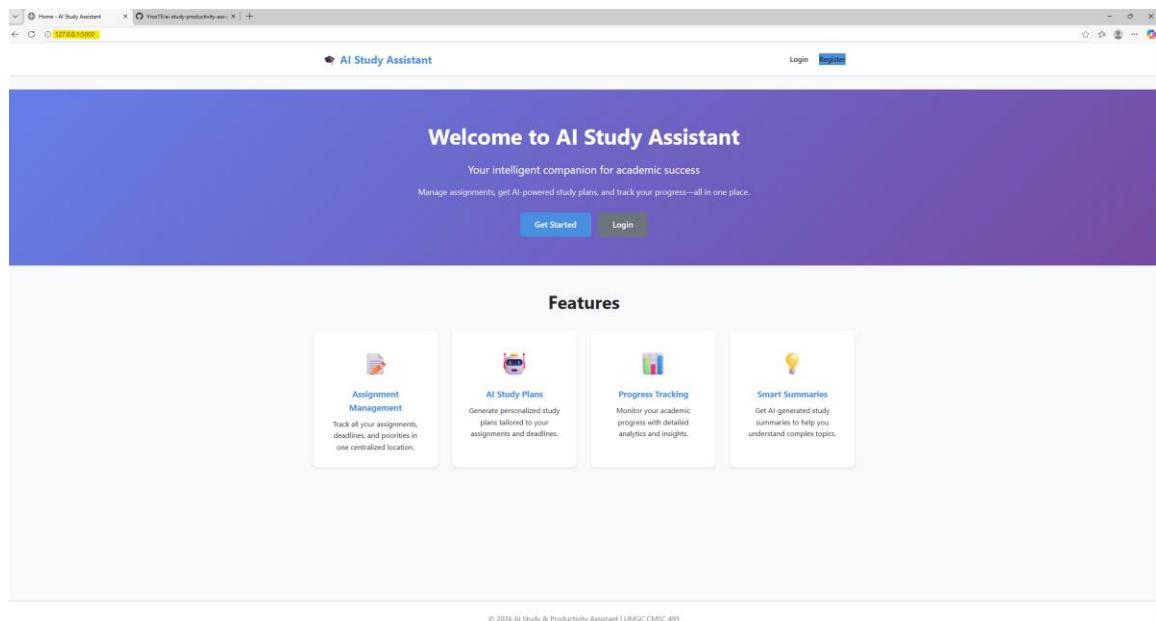
Step 3: Open the Application in Browser

Open your browser and go to:

http://127.0.0.1:5000

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Figure 2 – AI Study Assistant Home Page



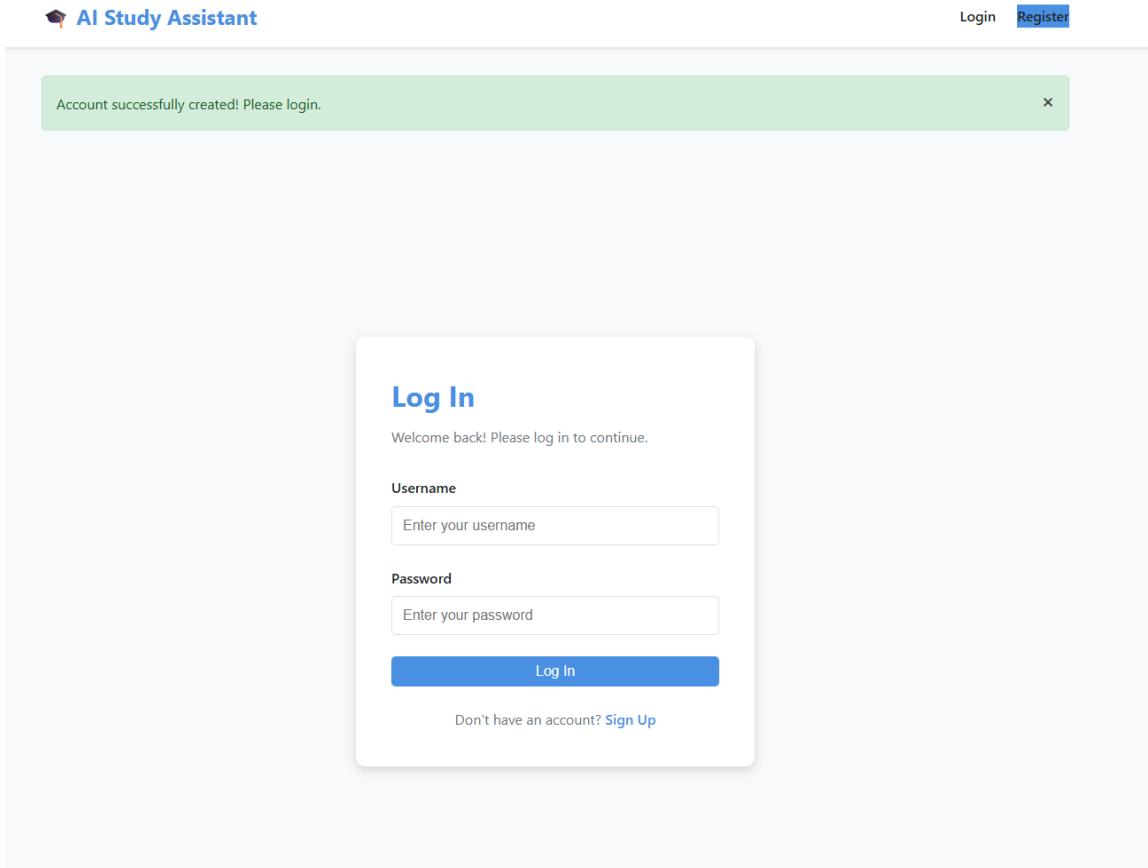
6. Getting Started

6.1 Creating an Account

1. Click **Register**
2. Enter:
 - Username
 - Email address
 - Password (minimum 6 characters)
3. Click **Create Account**

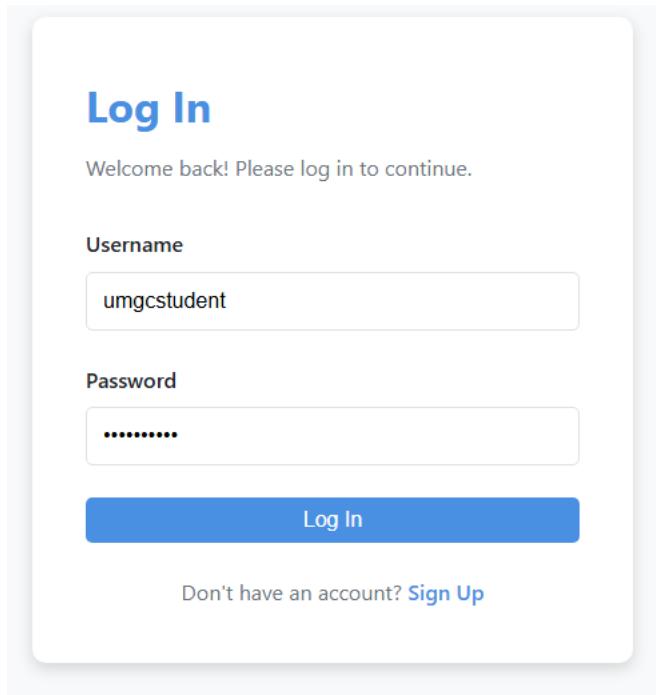
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If registration is successful, you will be redirected to the login page.



6.2 Logging In

1. Enter your username and password.
2. Click **Log In**.
3. Upon successful authentication, you will be redirected to your dashboard.



If credentials are incorrect, an error message will appear.

6.3 Dashboard Overview

The Dashboard displays:

- Total assignments
- Completed assignments
- Pending assignments
- Overdue assignments
- Assignment list with:
 - Title
 - Due date
 - Priority
 - Status
 - Action buttons (Edit, Complete, Delete)

Each user can only view their own assignments.

The screenshot shows the AI Study Assistant dashboard. At the top, there's a navigation bar with links for Dashboard, Assignments, Study Plan, AI Summary, Progress, and Logout. Below the navigation is a welcome message "Welcome, test2!" and a button to "Add Assignment". There are four cards showing assignment counts: Total Assignments (0), Completed (0), Pending (0), and Overdue (0). A section titled "Your Assignments" shows a message "No assignments yet! Start by adding your first assignment." with a "View All" button and an "Add Assignment" button.

6.4 Managing Assignments

Adding an Assignment

1. Click **Add Assignment**
2. Enter:
 - Title
 - Description (optional)
 - Due Date
 - Priority (Low, Medium, High)
3. Click **Submit**

The assignment will appear immediately on your dashboard.

Add Assignment

Assignment Title *

Description

User Guide for week 7 Capstone 495

Due Date * Priority *

Your Assignments

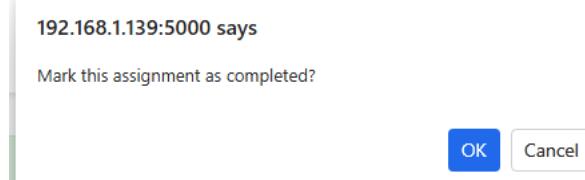
Assignment	Priority	Status	Actions
User Guide	HIGH	PENDING	<input checked="" type="checkbox"/> <input type="button"/> <input type="button"/>
User Guide for week 7 Capstone 495			
Due: Feb 24, 2026 (2 days left)			

Editing an Assignment

1. Click the **Edit** icon next to an assignment.
2. Modify fields as needed.
3. Click **Save Changes**.

Marking an Assignment Complete

Click the **Complete (✓)** button.



The assignment status updates to **Completed**.

A screenshot of the "Your Assignments" page. It shows a single assignment card for "User Guide". The card has a "HIGH" priority level and a green "COMPLETED" status indicator. The title is "User Guide for week 7 Capstone 495" and the due date is "Due: Feb 24, 2026". There are edit and delete icons at the bottom right of the card. A "View All" button is located in the top right corner of the main container.

Deleting an Assignment

1. Click **Delete**
2. Confirm the action

The assignment is permanently removed from your account.

6.5 Generating AI Study Plans

1. Click **Study Plan** in the navigation menu.
2. Select one or more pending assignments.
3. Click **Generate Study Plan**.

The system:

- Sends selected assignments to the AI module.
- Generates a personalized study schedule.
- Displays recommended time allocation and strategies.
- Saves the study plan to your progress history.

If no API key is configured, the system uses a fallback generator.

The screenshot shows the AI Study Assistant application interface. At the top, there is a navigation bar with the logo "AI Study Assistant" and links for Dashboard, Assignments, Study Plan (which is highlighted in yellow), AI Summary, Progress, and Logout. Below the navigation bar, the main content area has a title "Your Personalized Study Plan" and a subtitle "AI-generated on February 21, 2026 at 03:51 PM". The main content is organized into sections: "Personalized Study Plan", "Your Assignments", "Study Tips", and "Included Assignments". The "Your Assignments" section contains a single item: "1. UserGuide" with a due date of "February 23, 2026", priority "High", and days remaining "1". The "Study Tips" section lists several tips: "Break large assignments into smaller tasks", "Schedule regular study sessions", "Take short breaks every 50 minutes", "Start with high-priority items", and "Review completed work before submission". The "Included Assignments" section shows one assignment: "UserGuide HIGH - Due Feb 23, 2026". At the bottom of the page are three buttons: "Print Study Plan", "Generate New Plan", and "Back to Dashboard".

6.6 Generating AI Summaries

1. Click **AI Summary**
2. Select an assignment OR enter custom notes.
3. Click **Generate Summary**

The AI module will:

- Analyze the content
- Generate structured study guidance
- Provide key points and recommendations

The screenshot shows the AI Study Assistant application interface. At the top, there is a navigation bar with links for Dashboard, Assignments, Study Plan, AI Summary, Progress, and Logout. The main content area is titled "Study Summary". It displays information for an assignment titled "UserGuide". The "Key Information" section shows a Due Date of February 23, 2026 (1 days remaining) and a Priority Level of High. The "Description" section indicates the assignment is for UMG C CMSC 495 Capstone Project. The "Suggested Approach" section lists five steps: 1. Review all assignment requirements carefully, 2. Break down the assignment into manageable tasks, 3. Create a timeline for completion, 4. Gather necessary resources and materials, and 5. Start with the most challenging parts first. The "Additional Notes" section contains a detailed description of the assignment requirements, including guidelines for the User Guide document, submission process, and grading criteria. The "Study Tips" section provides four tips: Stay organized and keep track of your progress, Take regular breaks to maintain focus, Seek help if you encounter difficulties, and Review your work before final submission. At the bottom of the page are three buttons: "Print Summary", "Generate New Summary", and "Back to Dashboard".

6.7 Viewing Progress

Click **Progress** to view:

- Completion rate percentage
- Priority breakdown
- Timeline view of assignments
- Recently generated study plans

This feature provides academic performance insights.

6.8 Logging Out

1. Click **Logout** in the top navigation.
2. Your session ends securely.
3. You are redirected to the home page.

7. Standards & Usage Guidelines

- Use strong passwords.
- Do not share login credentials.
- Keep API keys private in the .env file.
- Do not manually edit the database file.
- Always log out when using shared computers.
- Use the run.bat file to ensure correct startup configuration.

8. Troubleshooting

Application Will Not Start

- Ensure Python is installed.
- Confirm run.bat was executed from project root folder.
- Verify internet connection.

Cannot Access http://127.0.0.1:5000

- Confirm the terminal shows:

```
Running on http://127.0.0.1:5000
```

- Refresh the browser.
- Restart the application.

AI Features Not Working

- Verify API key is added to .env.
- Ensure internet connection.
- Restart the application.

Database Errors

- Delete the SQLite database file (development use only).
- Restart the application to reinitialize.

9. Frequently Asked Questions

Q: Can multiple users use the system?

Yes. Each user has separate account data stored securely.

Q: Is my data secure?

Yes. User authentication and session management protect user data.

Q: Does the AI feature require internet?

Yes. AI generation requires internet access.

Q: Can this be deployed publicly?

Yes, with production configuration (WSGI server required).

10. Support & Contact Information

For technical issues:

- Contact project team members
- Submit an issue on GitHub
- Review README documentation