Project ID: 84

Project Title

Helping Research Students Stay On Track With Their Work

Client Name

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Group Capacity

2 groups

Project Background

Doing research at the undergraduate level can be overwhelming, especially for students who are new to the process. They often face challenges knowing where to start, how to plan their work, and what steps to take next. This project aims to explore how a digital assistant might help guide students through their research journey in a structured, user-friendly way. The goal is to design and build a web-based tool that acts as a research support platform, helping students stay organized, break down complex tasks, and make progress with more confidence. While the project won't deliver a fully intelligent assistant yet, it should lay the foundation for a future system that could include smarter features down the line.

Project Scope

Students will create a full web application, including both frontend and backend. The application should serve as a kind of structured workspace or guide for research students. It could help users:

- Get started with their research process
- Track tasks or milestones
- Access tips, resources, or simple checklists to stay on track

The platform should be flexible enough to adapt to different types of research projects. The backend may be developed in Python. The frontend can be built using modern JavaScript frameworks, and the design should focus on simplicity and ease of use. Interactive elements like chat-style guidance or step-by-step walkthroughs can be included to simulate more personalised help.

Project Requirements

The system should include:

- A login and user system to allow students to save and return to their work
- A profile or dashboard where students can view their progress and next steps
- A way to guide users through different phases of a research project
- Tools or forms that help with brainstorming, planning, or organising content
- A backend structure that can support future integration with AI tools
- A clear, supportive frontend experience that helps reduce overwhelm and confusion

Required Skills

Students should be comfortable with:
- Frontend web development using HTML, CSS, and a framework like React or Vue
- Backend development (preferably Python such as Flask, FastAPI, or Django)
- Designing and connecting APIs
- Thinking about how to break down larger tasks into helpful steps for users
- Basic knowledge about AI tools or future automation possibilities

Expected Outcomes

By the end of the project, students should deliver:
- Curiosity about AI tools or future automation possibilities
- Source code that is organised and documented
- A guide on how to use the system and how to set it up
- Documentation that explains how the system could be extended in the future

Disciplines

Web Application Development;Generative AI (GenAI);Human Computer Interaction (HCI);Cloud Computing;

Other Resources

Will be provided in the kick-off meeting:
- Open access research or writing resources students could link to in the app
- Suggestions for how to design step-by-step workflows or user guidance
- Students can use free-tier services or run the app locally, no paid tools are required