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Honor’s Thesis Prospectus

Dr. Sadenwasser

In light of the numerous challenges presented by the current AU course catalog system, I am diligently working on an innovative Python-based solution. This solution is specifically designed to revolutionize how students and faculty access essential academic information. My program will employ techniques to gather and process data, effectively extracting and consolidating course catalog information from both PDF and online sources. The end goal is to create a more reliable and user-friendly interface.

Leveraging Python’s powerful libraries, which are yet to be determined, I aim to develop a comprehensive system that can automatically collect and validate crucial course information. This includes details such as course titles, codes, descriptions, prerequisites, and credit hours. By integrating these elements, the system will provide a holistic and accurate view of the course offerings.

One of the primary objectives of this project is to address the limitations of the current catalog. These limitations include slow responsiveness, incorrect information display, and navigation difficulties, all of which can significantly hinder academic planning and decision-making. The proposed solution will deliver several key benefits to both students and faculty.

Firstly, the improved accessibility for academic planning will be a significant advantage. With a more intuitive and user-friendly interface, users will be able to navigate the system effortlessly, locating the information they need with ease. This enhanced user experience is designed to minimize frustration and make the process of academic planning more straightforward and efficient.

Secondly, the project aims to increase data accuracy by cross-referencing multiple sources. This approach ensures that the information provided is not only accurate but also up-to-date. This level of precision is critical for students and faculty who rely on the course catalog for making informed academic decisions.

Furthermore, the system’s scalable architecture is designed to integrate seamlessly with other university systems. This flexibility means that as the university's needs evolve, the system can be easily adapted and expanded to accommodate new requirements. This feature ensures that the solution remains relevant and effective over time.

The Python-driven approach to this project guarantees efficient data management. By utilizing Python’s robust libraries and frameworks, the system will be able to handle large volumes of data efficiently. This efficiency translates to faster data processing and retrieval times, allowing users to quickly locate and understand course requirements without experiencing delays or slowdowns.

In summary, the development of this innovative tool aims to transform the course catalog experience for the academic community. By providing a streamlined, reliable, and technologically advanced solution, the project supports the academic community’s information needs in a meaningful way. The goal is to create a system that not only addresses the current challenges but also sets a new standard for how course catalog information is accessed and utilized by students and faculty alike. Through this project, we aspire to enhance the overall academic experience, making it more efficient, accurate, and user-friendly.