Dublin City University School of Computing

BSc in Enterprise Computing
4th year project proposal (CA472)
Idea Proposal
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Project Title:

GradNav - Your Personalized Path to Educational and Career Success

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Project Summary (1 page):

Web App Name: GradNav

Overview: GradNav is a web application designed to guide secondary school students through the complexities of selecting the right educational path and career. The app's core idea is to provide personalized and datadriven recommendations based on students' Senior Cycle results, skills, character traits, hobbies, wants, needs, and experiences. It empowers students to make well informed decisions about their future by offering insights into suitable courses, colleges, and potential career options.

Features: The app lets students create personalised profiles from information regarding their Junior Cycle results, skills, character traits, hobbies, and more. The app uses guided surveys to collect detailed information from students, helping build a comprehensive profile. GradNav employs data analytics and machine learning algorithms to generate personalized recommendations. It suggests courses, universities, and career paths tailored to the individual's profile. The app serves as an information hub,

offering details on various courses, colleges, and career options. It includes insights into expected wages, job market trends, and work cultures.

Why We Chose This Project: We chose this project because we recognized the need for a comprehensive career and education guidance tool tailored to Senior cycle students as two students that struggled with knowing what it is that we wanted to do. The transition from secondary school to higher education and careers can be daunting, and students often face a lack of clarity. We are both passionate about education and technology, and we believe in the transformative power of personalized guidance. By developing GradNav, we aim to empower students, providing them with the tools and insights they need to shape their future with confidence and clarity.

Expected Technical Delivery (1 page):

In our final project delivery, we intend to provide a fully functional and user friendly web application known as GradNav. This technical delivery will encompass the following components: 1. **User Friendly Web App:** The core of our delivery is the web application accessible via standard web browsers. It will have an intuitive and user friendly interface to ensure a seamless user experience.

2. **User Registration and Profiles:** Students will be able to create user profiles by providing information about their Senior cycle results, skills, character traits, hobbies, wants, needs, and experiences.

3. **Guided Surveys:** The app will feature guided surveys that collect indepth data to build a comprehensive profile of each user.

4. **Data Analytics and Algorithms:** We will implement data analytics and machine learning algorithms to process user data and generate personalized recommendations for courses, universities, and career paths.

5. **Information Hub:** The application will serve as an information hub, providing detailed insights into various courses, colleges, career options, expected wages, job market trends, and work

cultures.

6. **Feedback and Support Features:** The app will incorporate a feedback forum that allows students to provide input, ask questions, and seek assistance. It will also enable direct communication with experts for personalized advice.

7. **Scalability and Reliability:** We will ensure that the web app is scalable and reliable to accommodate a growing user base and maintain a consistent, high quality user experience. 8. **Data Security and Privacy:** Implement robust security measures to protect user data and ensure compliance with data privacy regulations.

Market Rationale (1 page):

Market Summary: The market for GradNav is characterised by a significant demand for guidance and information among Senior Cycle students in Ireland. Potential users include students at various stages of their secondary education, teachers and counselors, as well as parents who are actively involved in their children's educational and career decisions. The market is marked by a desire for personalised, datadriven guidance to navigate the complex choices related to future educational pathways. The need for such a tool is further underscored by the evolving job market, with a growing emphasis on the alignment of education with career opportunities.

Primary Research

1. **User Surveys:** We have created a Google Forms survey to distribute surveys among secondary school students across different schools to assess their interest and needs. These surveys will help us gauge their willingness to use such a tool.

2. **Focus Groups:** We have organised a focus group of secondary school students that we know to understand their pain points, expectations, and requirements for a career guidance tool. 3. **User Feedback:** We will actively seek user feedback and suggestions for improvement.

Secondary Research

1. **Market Analysis:** Conduct a thorough analysis of the current market for educational and career guidance tools. This will involve studying existing products and understanding their strengths and weaknesses.

2. **Competitor Research:** Examine the strategies and success of existing players in the field. This will provide insights into the level of demand for such services.

3. **Educational Trends:** Research current educational trends and their impact on the choices made by secondary school students.

Proposed Timeline (1 page max):

Sem 1, Week 1 - 3: Project Planning, Feasability Study, Market Research and Secondary Research Gathering

Tasks: Define project scope, objectives, and requirements. Conduct a feasibility and market research study, gathering relevant infomation.

Sem 1, Week 4 - 6: Ethics Document and Survey Creation. Feedback Analysis and Platform Enhancement

Tasks: Complete Ethics Document. Conduct user surveys, compile survey data, formulate questions, and initiate focus group discussions. Analyse user feedback and make preliminary platform adjustments.

Sem 1, Week 7 - 9: App Development Phase 1

Tasks: Begin developing the core features and functionalities of the GradNav platform.

Sem 1, Week 10 - Sem 2, Week 1: Focus Group Discussions and User Feedback and App Development Phase 2

Tasks: Host 2nd focus group discussions and gather additional user feedback.Continue developing and

refining the GradNav platform based on user feedback and research insights.

Sem 2, Week 2 - 4: Marketing Strategy Development. Pilot Testing and User Feedback *Tasks:* Devise a marketing strategy for promoting and selling GradNav to the target audience. Complete business plan. Send a pilot test of the GradNav platform to the users involved in primary data gathering and gather feedback from pilot users.

Sem 2, Week 5 - 9: Final Platform Refinements and Marketing and Promotion

Tasks: Implement final adjustments to the platform based on pilot test results and additional user feedback. Finish marketing and promotion activities and the other business requirements for the module.

Sem 2, Week 10 - 12: Documentation and Final Presentation. Project Submission

Tasks: Prepare documentation and final presentation for project submission. Submit the finalized GradNav project.

This timeline is a general guideline and can be adapted based on project needs and requirements. *

Workload Distribution (for teams with 2 or more members):
Technical Components
Platform Development:
Both will be actively involved in designing, developing, and testing the GradNav platform.
- **UI/UX Design:** Collaborative design for an intuitive and visually appealing interface. Using feedback from data gathering.
- **Front-End and Back-End Development:** Split responsibilities for front-end coding and back-end system development.
- **Data Integration and Machine Learning:** Collaborate on integrating data sources and implementing machine learning models (using OpenAI or an LLM like ChatGPT).
- **Testing, Security, and Scalability:** Joint efforts in testing, ensuring security, and ensuring platform scalability for future growth.
- **Documentation and User Support Features:** Work together on platform documentation and user support features for a seamless user experience.

User Research:
Stephanie (S) will create the survey, adapted by Martins (M) with the help of sister (currently in Senior Cycle). Both will collaborate on conducting user surveys, focus group discussions, and analysing feedback.

Data Analysis and Insights:
 Both will contribute to the analysis of user data and the integration of insights into the platform.

Pilot Testing:
S will participate in the pilot testing phase in half the schools and M in the other half, gathering user feedback and making necessary adjustments.

Platform Refinement:
S and M will jointly make refinements based on feedback and research findings.

Commercial Components:
Marketing Strategy:
M will identify target audiences and promotional channels. S will then contribute to the development of a marketing.

Market Research:
Market and competitor research responsibilities will be done by M. S will compile the data found and assess market trends.

User Engagement:
Both will actively engage with users, gather their feedback, and ensure a usercentric approach in marketing and platform development.

Documentation and Presentation:
The documentation and final presentation will be a collaborative effort, with each member contributing to the content and delivery.

Staff Consulted:

We consulted Jennifer Foster our Project Advisor.