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Atlantic
Technological
University

B.Sc. (Hons) in Software Development
Applied Project & Minor Dissertation

Project Proposal

Each student must complete the following form and submit it to their supervisor for consideration. Once your supervisor has signed-off on the proposal, you must submit the document for consideration using Moodle.

1. Student Name:

Eoin Lawless

2. Supervisor Name:

Andrew Beatty

3. Project Name:

DEP – Fitness app

4. Project Context

Describe the context of the problem domain here. Explain what you are proposing to do and your rationale for doing it. Explain why the problem domain is of interest.

For our project, We are making a fitness app, using Ionic and angular. This will be available on Android (and possibly IOS). The main application of the of the app will be using a camera to correct posing on squatting or yoga poses. It helps people correct their structure and correct them.

A secondary application to work on the would be calculating the distance people run but has yet to be determined in the time frame.

Our project will be broken into three parts, Due doing dev-ops, Pedro doing front-end, and I shall be focusing on coding the methods.

It is interesting to me to work with OpenCV computer vision to enable a wide range of applications and its large array of tools, like motion tracking, object detection and possibly interactive code.

5. Project Objectives

Write out the key objectives of the project as bullet points. Each objective should be clear, realisable and measurable / testable, i.e. the success of your project is determined by the degree to which these are realised.

- Learning more into OpenCV
- Creating real life test casing
- Learning use of Agile methods
- Creating camera vision software
- Using python more efficiently
- Motion tracking and artificial recognition

6. Technologies & System Architecture

Explain the technologies you are going to use and why you selected them. These include the programming languages, operating systems, presentation and storage technologies and any cloud / 3rd party libraries / services that you intend to use.

Architecture:

React
FireBase

Technologies:

Selenium
Python
OpenCV
React motion/tailwind
JavaScript/TypeScript



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7. Schedule of Work

Using a Gantt chart or tabular format, outline your schedule of work for all the key project activities, deliverables and dates.

Dates	Activity	Duration	Goal and Deliverables
19th Sep - 14th Oct 2023	Project Proposal and Planning	4 weeks	<ul style="list-style-type: none"> - Project proposal complete - Basic architecture planned out - Project roles and technologies clearly discussed
15th Oct - 22nd Oct 2023	Project Setup	1 week	<ul style="list-style-type: none"> - Backlog writing and functionalities discussed - Discussing amount of work per each cycle - Setup development environment - DevOps: Basic integration of Firebase and GitHub Actions
23rd Oct - 5th Nov 2023	Cycle 1	2 weeks	<ul style="list-style-type: none"> - First version with basic functionalities done
6th Nov - 19th Nov 2023	Cycle 2	2 weeks	<ul style="list-style-type: none"> - Second version of the application
20th Nov - 3rd Dec 2023	Cycle 3	2 weeks	<ul style="list-style-type: none"> - Third version of the application
4th Dec - 31st Dec 2023	Cycle 4	4 weeks	<ul style="list-style-type: none"> - Fourth version of the application - Cycle is longer due to projects and assignments
1st Jan - 21st Jan 2024	Cycle 5	3 weeks	<ul style="list-style-type: none"> - Fifth version of the application - Cycle is longer due to exams
22nd Jan - 4th Feb 2024	Cycle 6	2 weeks	<ul style="list-style-type: none"> - Sixth version of the application
5th Feb - 18th Feb 2024	Cycle 7	2 weeks	<ul style="list-style-type: none"> - Seventh version of the application
19th Feb - 3rd Mar 2024	Cycle 8 (Final Cycle)	2 weeks	<ul style="list-style-type: none"> - Eight version of the application - Focused on bug fixing and minor cleanups
4th Mar - 31st Mar 2024	Dissertation and Other Deliverables	4 weeks	<ul style="list-style-type: none"> - Writing up dissertation and gathering research used to aid the project - Designing the A0 poster of the application
1st Apr - 12th Apr 2024	Final Dissertation and Project Wrap Up	2 weeks	<ul style="list-style-type: none"> - Dissertation and final touches of the project - Screencast recorded - Presentation work to be done in May