

Student Proposed? <i>If Yes, add student name</i>	No
ID:	FS24-03
SUPERVISOR:	WPF Schonken
TITLE:	2D Game Design using GameMaker™
DESCRIPTION:	<p>Recent years have seen corporate greed actively destroy the AAA game industry, which has been a significant motivation for developers to move the Indie space. Independent games are having a spectacular year in 2024 (at least so far), with some very good game development tools.</p> <p>This project will use one of these tools, specifically GameMaker™ (Make 2D Games With GameMaker Free Video Game Maker), to create a fun 2D game. Game development concepts like core gameplay loop, player choice in the form of divergences, juxtaposition gratification, etc. must be addressed. The game must be complex enough to satisfy GA 1 and GA 4, which will make this a challenging project.</p> <p>For more information on the technical side of game design, have a look at the Design Delve videos on Second Wind's YouTube channel: (674) Design Delve - YouTube</p>
DELIVERABLES:	<ul style="list-style-type: none"> • Functional 2D game • Detailed Report
SKILLS/REQUIREMENTS:	<ul style="list-style-type: none"> • Strong programming skills • An interest in video games and game development
GA 1: Problem solving <i>Identify, formulate, analyse and solve complex* engineering problems creatively and innovatively</i>	With sufficient game complexity there should be enough problem solving required.
GA 4: Investigations and analysis <i>Demonstrate competence to design and conduct investigations and experiments.</i>	Ample opportunity for testing and evaluation.

GA 5: Use of engineering tools: <i>Demonstrate competence to create, select and apply and recognise limitations of appropriate techniques, resources and modern engineering and IT tools, including prediction and modelling, to complex engineering problems</i>	GameMaker™
EXTRA INFORMATION	Warning: This is a dangerous, open-ended project and should only be considered by students with strong programming skills, a serious interest in gaming/game development, and an artistic streak. If you do not meet these requirements at the start of 2 nd semester, this topic will be scrapped and a new random topic will be assigned to you.
BROAD Research Area	Game development, programming
Suitable for ME/ECE/EE/ALL?	ECE

Ethics clearance questionnaire

		Yes	No
Q1	Does this project involve data collection	x	
Q2	Does this project involve utilizing a third-party data set		X
Q3	Does this project utilize machine learning (ML) or artificial intelligence (AI)?	x	
Q4	Does it exceed the minimum risk defined here: Link [Answer is No here if your project does not utilize ML and AI]	?	?
Q5	Does this project involve external parties, funders, etc		x

Answer the following questions if you answer "**Yes**" to any of the above questions.

If the answer is "**Yes**" to **Q1**, please answer the following questions:

		Yes	No
Q6	Are there humans or animals directly involved in the data collection process or contains any identification information		x

If the answer is "**Yes**" to **Q2**, please answer the following questions:

		Yes	No
Q7	Are the third-party data used anonymous (data does not contain human or animal-related information?)		x

Q8	Are the third-party data used from an open source?		x
Q9	Are the third-party data used from a different research group?		x
Q10	If the answer to Q9 is “ Yes ”, do you have the approval to use third-party data sets? Attach the proof to PSQ application.		

If the answer is “**Yes**” to Q5, please answer the following questions:

		Yes	No
Q11	Have you signed an MOU between the parties [If Yes, attach the proof to PSQ application.]		
Q12	Will there be a chance for any conflict of interest between the parties? [If Yes, provide details of the issue and your plan to solve it]		