

# Initial Project Plan

<b>Project Title:</b> Challenge existing conceptions about females in IT	<b>Module Title:</b> One Semester Individual Project
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<b>Supervisor:</b> Dr Matthew Morgan	<b>Credits:</b> 40

## Project Description:

Within the IT industry there is a distinct lack of female employees compared to the number of males.

In 2019 the office for national statistics found that 12% of the workforce were women for the profession of programmers and software developers (ONS 2019).

Similarly in 2017 the Career Smart Organisation found that 13.6% of the workforce is made up of women for the same profession (Career Smart 2017). Both statistics show the drastic difference between the genders with a decline in numbers from 2017 to 2019.

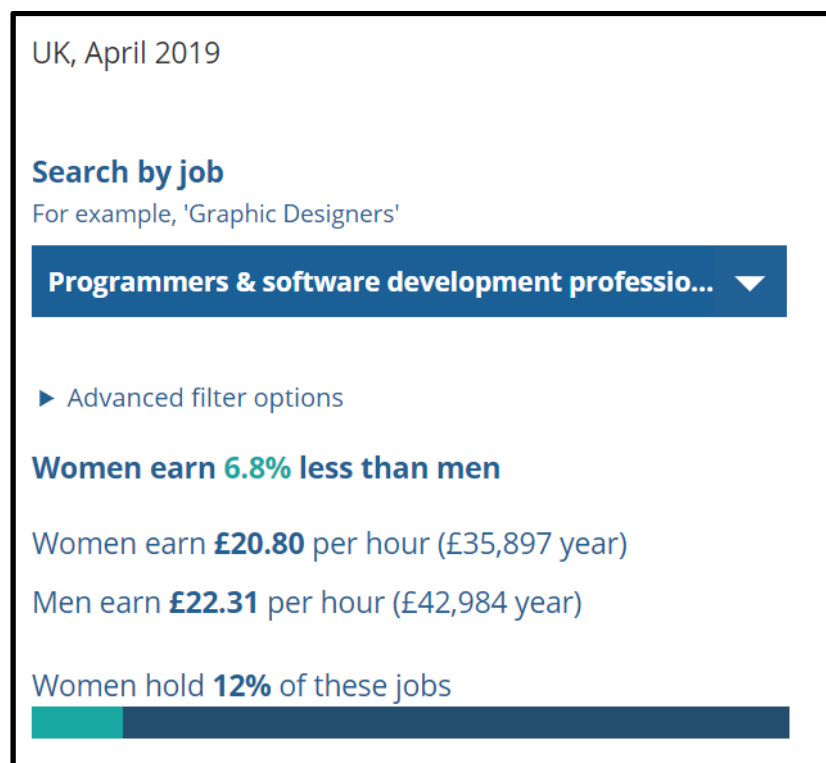


Figure 1. Office for National Statistics

The overall aim for this project is to build an application that will challenge the existing conceptions of gender gaps in the IT industry. I will do this by using a quiz to find out users preconceptions and educate them by giving the actual facts from the quiz results.

According to PwC research report, 3% of women say that a career in technology is their first choice. (PwC 2017). This statistic is an example of the content that will be in my quiz.

### **Project Aims and Objectives**

My solution to this problem is creating an educational tool that tests users on their knowledge about females in IT. The project will have multiple dashboards that focus on different topics within the scope of this issue. The first dashboard that I will be building in the timeframe given will be the interactive quiz. The design of this quiz is to ask a range of questions about females in IT and record the numbers of questions answered correctly. This will give the user a score out of 10. Once the user has completed the quiz, I will give them their results and reveal the correct answers.

My aim is to impact the users by showing the facts and statistics from the quiz, naturally the impact will be greater with the more questions answered incorrectly.

The content comes from various papers such as 'Women Working in the IT Industry: Challenges for the New Millennium' by Sue Hilary Nielsen Jan 2015. Content for this project will also come from Statistical sources such as the 'Office for National Statistics' and the 'National Centre for Women and Information Technology'.

The second dashboard will include an insight into the IT industry. I will compare and contrast subjects within the IT field, like Computer Science against more stereotypically female focused subjects for example English Literature and Psychology. I will compare the gender ratio in these subjects for Cardiff University, I will compare how many students had these subjects as their first choice. I will contrast the annual salaries of these industries.

My aim is to plot this data on graphs to show the noticeable differences of genders in these fields. I also aim to encourage people to consider the IT industry.

I will use Umbraco 8 as the Content Management System to create my project because this is the software that I was using during my year in industry. I have considered using other technologies to complete my project, but as I come to the end of my degree, I want to create a project using Umbraco to show employers as I approach job applications, this can be done by putting my completed project on github. I will use Umbraco alongside Azure DevOps, which is my method of version control as I will be running this project with an Agile methodology.

Project Overlay

See Figure 2 for a brief diagram of my vision for this project.

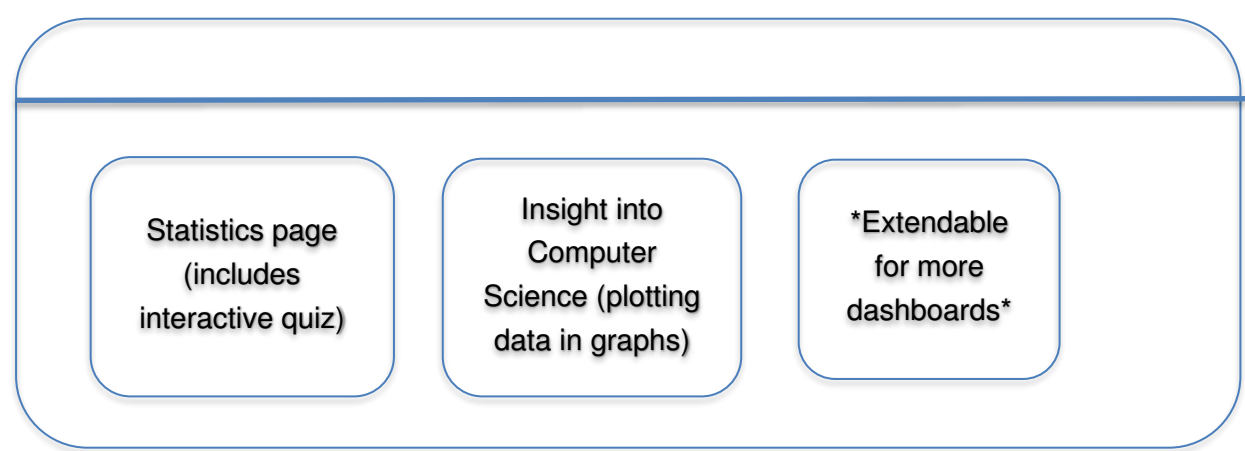


Figure 2

Work Plan

				January							February						
				27	28	29	30	31	1	2	3	4	5	6	7	8	9
				<													
Milestone Description	Category	Start	No. Days	M	T	W	T	F	S	S	M	T	W	T	F	S	S
Sprint 1																	
Research published papers about women in IT	Goal	03/02/2020	3								◆	◆	◆				
Gather statistics and their references about women in IT	Goal	05/02/2020	1										◆				
Pick out the most impacting statistics to use in 'impact quiz'	Goal	06/02/2020	2											◆	◆		

Above shows Sprint 1 of the work plan. The week beginning the 3rd February I will start to gather research for my project, including researching papers and this ties into finding statistics and other sources I can reference. I have given a total of four days to gather all this information and have overlapped these tasks. I plan to spend the latter part of the week focusing on which statistics have the greatest impact and will group these together to use in later sprints for a quiz.

5				February															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				<															
Milestone Description	Category	Start	No. Days	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S
<b>Sprint 2</b>																			
Create Umbraco 8 project, create azure dev ops, link technologies	Goal	10/02/2020	2										◆	◆					
Plan brief story board for home made and statistic page	Goal	12/02/2020	1												◆				
Create homepage body to add dashboard icons	Goal	12/02/2020	3												◆	◆	◆		

Sprint 2 starts the week beginning the 10th February. This week I want to work creating the skeleton of my architecture. This involves setting up my Umbraco project and connecting it to the azure devops. I have given myself 2 days to set up the Content Management System and version control because I have experience doing this before and believe that not much contingency time is required for this. I will also start to build objects on the homepage. This feature is necessary because I want this project to be extendable for more dashboards in the future.

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				February							
				16	17	18	19	20	21	22	23
				<							
Milestone Description	Category	Start	No. Days	S	M	T	W	T	F	S	S
<b>Sprint 3</b>											
Have review milestone meeting with supervisor	Goal	17/02/2020	1		✿						
Begin working on adding objects to statistic page and displaying basic info	Goal	17/02/2020	2		✿	✿					
Polish statistic page off this week without quiz	Goal	19/02/2020	3				✿	✿	✿		

During sprint 3 I will have a milestone meeting with my supervisor on the 17th February to discuss how the project is going and compare it to my plan. I will also begin to create objects for my statistics page (this page will include the interactive quiz) which will be justified by the storyboard designs for this page made in sprint 2. By the end of this week I want to polish off this page, which includes creating all objects necessary for example any layout objects and buttons without creating the quiz itself.

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				February							
				24	25	26	27	28	29	1	
				<							
Milestone Description	Category	Start	No. Days	M	T	W	T	F	S	S	
<b>Sprint 4</b>											
Create quiz for statistic page	Goal	24/02/2020	2	✿	✿						
Plan story board for insight into IT page	Goal	25/02/2020	3		✿	✿	✿				
Begin plotting data against another	Goal	27/02/2020	2				✿	✿			

Sprint 4 starts the week beginning the 24th February. This sprint involves creating the basic score based quiz to complete the statistics page. I have given myself 2 days to complete this quiz as in theory it should be a basic score system that is completed anonymously and only records the user's score. After this I will begin thinking about how the 'Insight into Computer Science' page will look and using the data gathered in sprint 1, I will begin to plot data about computer science against other subjects. I will use excel to create the graphs and trial and error what data has the greatest impact.

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				March							
				1	2	3	4	5	6	7	8
				<							
				S	M	T	W	T	F	S	S
Sprint 5											
Create the layout for the insight page	Goal	02/03/2020	3								
Add content onto insight page	Goal	04/03/2020	2								
Polish insight page	Goal	06/03/2020	1								

Sprint 5 begins the week starting 2nd March. This week I plan to create the layout for the 'Insight into Computer Science'. In this sprint I have given myself 3 days to create the objects that will match the brief story board designs created in previous sprints. I will take 2 days to add in the content of the graphs from the previous sprint and at the finish this sprint by polishing up this page.

42				March						
				9	10	11	12	13	14	15
				<						
Milestone Description	Category	Start	No. Days	M	T	W	T	F	S	S
<b>Sprint 6</b>										
Have a milestone meeting with supervisor	Goal	09/03/2020	1	🔴						
according to milestone meeting	Goal	09/03/2020	3	🔴	🔴	🔴				
Begin testing phase of project	Goal	12/03/2020	2				🔴	🔴		

At the start of sprint 6 I will have a milestone meeting with my supervisor and discuss the work I have done so far. The rest of the week I will be making changes to the project from the feedback I have received to ensure that it is meeting a minimum viable product.

48				March							
				15	16	17	18	19	20	21	22
				<							
Milestone Description	Category	Start	No. Days	S	M	T	W	T	F	S	S
<b>Sprint 7</b>											
Continue testing phase this week	Goal	16/03/2020	3		●	●	●				
See what simple 'nice to haves' can be added	Goal	19/03/2020	1					●			
Finish MVP	Goal	20/03/2020	1						●		

The final sprint of the project I will be testing the project and resolving minor bugs. I will look to see what things can be added to the project to add value. I will finish a working version of the project by the 20th March I have intentionally planned to finish the end of week 8, rather than the 27th March week 9 as previously required. This is to give myself a week of contingency time and to prepare for unseen commitments from other areas.

I have also scheduled my work plan for weekdays and purposely excluded weekends as this project runs alongside other modules for my course.

Throughout the duration of the project I will be keeping a diary and a draft version of my report. This draft version will be added to at the end of every week and will be shown to my supervisor on the milestone meetings.

After the 27th March I intend to stop development on my project and solely focus on my final report, which will have some ideas written down as I will have been adding them throughout development.

## References

[ONS 2019]

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/genderpaygapintheuk/2019>

[Career Smart 2017] <https://careersmart.org.uk/occupations/programmers-and-software-development-professionals>

[Challenges for the New Millenium- Sue Hilary Nielse 2015]

[https://www.researchgate.net/publication/29457246\\_Women\\_Working\\_in\\_the\\_IT\\_Industry\\_Challenges\\_for\\_the\\_New\\_Millennium](https://www.researchgate.net/publication/29457246_Women_Working_in_the_IT_Industry_Challenges_for_the_New_Millennium)

[NCWIT 2020] <https://www.ncwit.org/>

[PwC 2017]

<https://www.pwc.co.uk/women-in-technology/women-in-tech-report.pdf>