UNIVERSITY OF YORK: COMPUTER SCIENCE

SFIA: A SKILLS BASED APPROACH TO STUDENT PLACEMENT ASSESSMENT
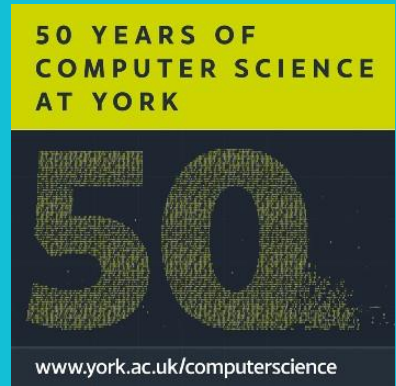
LUKE BRYANT
RELATIONSHIPS MANAGER

INTRODUCTIONS

- Relationships Manager in the Computer Science Department at the Univesity of York

- History graduate with a Masters Degree in Careers Guidance & Development

- Working at the University for 4 and a half years with responsibility for managing industry relationships & student employability

UNIVERSITY OF YORK AND COMPUTER SCIENCE

- University of York is top 20 UK university and a member of the Russell Group (research intensive, academically excellent)

- Our Computer Science department has just celebrated its 50 year anniversary in 2022 and is one of the UKs leading CS departments

- We have 800 UG students split across 4 courses

- All of our UG courses can be taken with an optional year in industry in year 3

50 YEARS OF COMPUTER SCIENCE AT YORK

50

www.york.ac.uk/computerscience

NUE AWARDS

Best University Placement Service (Supporting Under 750 Students)

FINALIST 2021

THE YEAR IN INDUSTRY EXPLAINED

- The year in industry programme enables students to work for a year as a formal, accredited part of their degree

- 50% of our UG students take up this option and complete a placement. This equates to roughly 80 students per year

- Students undertake placements with a variety of different companies & across a range of role types. This requires flexibility in the way we assess them

- Students are registered on a 120 credit placement module for the year. This is a pass/ fail year and does not count towards their overall degree classification

- Students are assigned a supervisor and are fully supported during the year. We will have regular video calls where students are provided with support, advice & guidance

- Assessment is via a reflective learning journal and a poster. SFIA skills and behaviours are integrated into the assessment

HOW DOES THE ASSESSMENT WORK?

- Students complete a 3000 word reflective learning journal for their placement assessment. The focus is for students to reflect on their learning throughout their year and to highlight their own personal development

- Students select 2 technical skills from the framework to be assessed against. These may change as the placement progresses. We support students to select the most appropriate skills

- We expect students to start the year at level 2 and work towards and potentially achieve level 3 by the end of the placement

- The learning outcomes for the assessment are aligned with the level 3 SFIA behaviours

- Formative feedback provided during the year by the student's placement supervisor
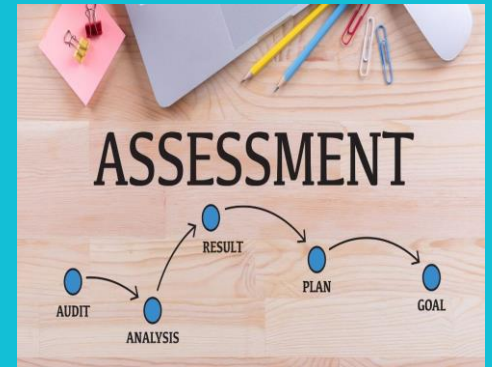
LEARNING OUTCOMES

Autonomy
1. Work under general direction.
2. Uses discretion in identifying and responding to complex issues related to own assignments.
3. Plans and monitors own work (and that of others where applicable) competently within limited deadlines. **

Influence
4. Interact with and influence colleagues.
5. Understand and collaborate on the analysis of user/ customer needs and represent this in your work
6. Contributes fully to the work of teams by appreciating how own role relates to other roles.

Complexity
7. Perform a broad range of work, sometimes complex and non routine, in a variety of environments.**
8. Applies a methodical approach to routine and moderately complex issue definition and resolution.
9. Applies and contributes to creative thinking or finds new ways to complete tasks.

Business skills
10. Demonstrates effective oral and written communication skills when engaging on issues with colleagues, users/customers, suppliers and partners.**
11.Understands and effectively applies appropriate methods, tools, applications and processes.
12. Takes the initiative to develop own knowledge and skills by identifying and negotiating appropriate development opportunities.**

Knowledge
13. .Appreciates how own role and others support appropriate working practices.

LEARNING JOURNAL TEMPLATE

PART 3 - LEARNING JOURNAL

Introduction

You should give an overview of the company and your role. Consider the purpose of your role and how it fits within the structure of the business

Induction

Describe the first 2/3 weeks of your placement. What did you learn? What were your reflections? Did it match your expectations?

First Project/ Major piece of work

Describe the project/ piece of work. What was the purpose of it and its objectives. What was your role within it? Consider how you planned your approach to the work & how you ensured you met deadlines. What issues and challenges did you face? How did you address these and what did you learn from them? What was the outcome of the piece of work/ project? What did you learn? What might you do differently next time?

Second Project/ piece of work

Follow the above guidance for each subsequent piece of work. Try and incorporate any learning from previous projects. Make sure you regularly reference the learning objectives and describe how you are progressing towards the level 3 SFIA skills.

Add additional projects as required

Summary

Describe your overall experience of your placement. Did it meet your expectations? Were you able to develop all the skills you set out in your learning plan? What were the key things you have learnt from the placement? What are your key takeaway experience from doing the placement?

THE STUDENT'S JOURNEY

During the initial planning stage, I worked closely with both my line manager and chief information security officer to appropriately scope out the project. This scoping stage enabled me to plan and schedule the report, setting appropriate deadlines which needed to be met. This was a vital step within this project, as it enabled me to have regular meeting to track my progress as the project started to develop. An important meeting was also held with my line manager during this stage to discuss legislation, standards, and procedures that the product would fall under, such as GDPR. As we were dealing with a data-leak, it was important that data was handled correctly. Therefore, I escalated this issue to a higher level where the chief compliance officer was able to outline the compliance regulations required.

Once the deadlines for the project were set, I had to begin the research into this subject to start writing. This required me to find contextual information around this group to help inform the reader as to the how and why the data-leak surfaced. Not only did I have to analyse information from a variety of sources, but I assessed the effectiveness of them. This is because some of them contained little useful information, as can be corroborated. During this stage, I had to assess the needs of the reader and communicated with my colleagues to assess their level of knowledge on the subject. This enabled me to develop an introduction that had enough contextual information to inform the reader on the subject.

THE STUDENT'S JOURNEY

During my time at the company, testing has played a vital role in ensuring that our code quality was good. While working on the numerous projects that I listed in the learning journal, I spent a huge majority of my time working on tests. These tests ranged from unit tests to integration to end-to-end tests and so on. As the codebase was new to me, tests helped me get a better understanding of the code base. I constantly worked on designing various test cases for different unit and integration tests. I was able to define test conditions as well as being the first developer in my team to hook up a database emulator with our integration testing approach.

This was extremely beneficial as it is used during the integration testing approach for some of our services. In addition, with my work with Magefiles, I had designed test scripts that would be run on our CI/CD pipeline every time code was committed to a pull request as well as the main brain. This again was important as these test scripts provided overall test coverage for each test in the service in the form of a report. This allowed developers on our team to see what code was being covered by our tests as well as the missing tests for certain functionalities.

UNIVERSITY of York

ASSESSMENT OUTCOMES

- We assess the level students have achieved in their selected SFIA skills

- Students receive pass/ fail grade for the University year

- A SFIA consultant moderates sample of journals

- We provide certification highlighting the skills they have used and the level they have achieved

ROLES INVOLVED

- Relationships Manager leads the programme and acts as a student supervisor and marker

- A small team of additional University supervisors & markers

- Student's workplace supervisor involved in goal setting and monitoring

- The student

- SFIA Consultant as a moderator & trainer
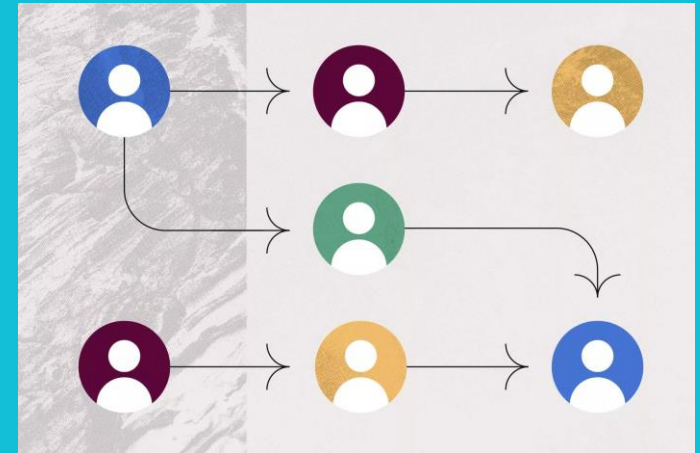
THE BENEFITS OF USING SFIA FOR OUR PLACEMENT ASSESSMENT

- Certification & accreditation

- Helps students to articulate their learning & development in an interview situation. Something computer scientists often struggle with!

- Planning & objective setting at the start of the placement. This is done in collaboration with their company line manager

- Assessing students achievements against an industry recognised standard

- Career exploration & mapping. What skills have I used? What might a career look like in different areas of the industry & what skills would I need to develop to get there?

QUESTIONS?