Tutorial 7 – Professionalism in Practice

1. Online safety in School

Safety Plus is an automated Internet content filter designed to help schools block inappropriate content. Safety Plus has a centrally controlled blacklist maintained by buying a stoplist from a company. Over the summer this producer merged with another company. The new company had a great product but it was more expensive so the CIO of Safety Plus asked an in-house development team to use machine learning techniques to automate the identification of inappropriate content. There weren't any ML specialists in that team, but the team lead wanted to run the project so didn't mention it, and asked one of the junior developers to take on the task as she was a talented programmer and was always keen to take on challenges. While making changes, the team combined input from both school and library users to aid in the classification of content. The CIO was pleased with the initial results and decided to deploy the new system. The team lead had concerns that the system hadn't been tested enough, but didn't say anything to the CIO because he wanted to be promoted. Soon after going live, the team started receiving complaints from schools about climate change content being blocked inappropriately. It seemed that activist groups had exploited the feedback mechanism to corrupt the classification model. The CIO was furious and asked the team lead for an explanation. The team lead blamed the junior developer saying she said it was working and clearly wasn't competent. As a result the CIO sacked the junior developer.

   a) Pick one of the 3 professional codes of practice we looked at in the lecture (BCS, ACM or IEEE).
   b) Pick out relevant 5 points from the code and use them to identify the responsibilities you would need to consider as a software engineer in this scenario.

For example with the BCS code:

2a – **only do work within your professional competence** … no-one in the team has specialist ML knowledge, the team lead should have said that, including the junior developers.

2f **– avoid injuring others, their … employment by false or malicious or negligent action or inaction**. The team lead's actions in not being honest with the CIO about skills of his team members and his subsequent reliance on a junior developer, led to the junior developer unfairly losing their job.

3a – **use your professional judgement even while carrying out professional responsibilities** – the team lead should have said that in his judgement the testing was not complete to the CIO.

3c – **accept professional responsibility for your work and the work of colleagues who are working under your supervision** – the team lead shouldn't have blamed the junior developer for the failure of the system, he should have taken responsibility himself.

3f **do NOT misrepresent or withhold information on the performance of products, systems or services** – the team lead misrepresented the state of the software to the CIO leading to it being deployed live, when it was not ready.

4a – **don't bring the profession into disrepute** – by allowing the system to be released when it wasn't ready the team lead damaged the reputation of his company and the profession

4d - act with integrity and respect in your professional relationships with all members of the BCS – the team lead should have acted with more integrity towards the junior developer. He put her in a difficult position and then didn't support her.

4e - encourage and support fellow members in their professional development – rather than giving the junior developer an impossible job, the team lead could have sent her and other staff on extra training, so they could have developed the skills needed.

2. Car sharing scenario

As a new graduate you get a job working for a start-up company that has spotted a gap in the market for developing apps for small businesses in the Glasgow area. There is a lot of business innovation going on and hence a need for speedy and competitively priced software houses to create and maintain the tech solutions these new businesses need to thrive. One of the first projects you work on is an app for a car-sharing idea developed by a start-up trying to encourage sustainable resource-sharing. The idea is that local members pay a small annual registration fee and then have access to a bank of electric cars that they can hire at a reasonable rate for any amount of time from 1 hour to 2 weeks in hourly/daily increments. The app will need to help members register, log-in, select and book cars, change and delete bookings, and make payments.

As a group read the statements overleaf and fill in the Q-sort grid finding one space for each statement (this is developed from Schwarz' values model)

1. What statements are most important to your project?
2. Why did you choose them, what agreements and disagreements were there?
3. What statements are least important and why?
4. Did you identify any missing statements? Add them to the side of the grid

Notes: This relates back to Schwartz's values. Team members are likely to have different values and it will be interesting to see what they think is most and least important. You often get patterns of values that several people will hold, but there will be several different patterns.

It is important to me	It is important to me	It is important to me	It is important to me	It is important to me
to be given the freedom to produce new ideas, inventions and creative works **1**	the software I develop is robustly and usably secure **2**	to enjoy the process of developing software **3**	that I do not annoy or upset anyone in the course of my work **4**	that the public good is the central concern of all professional computing work **5**
that the software I develop Influences the end user **6**	that I credit fully the work of others and refrain from taking undue credit **7**	that I identify and address any environmental issues related to my work **8**	that my work is respected **9**	that I am allowed to take risks when developing software **10**
to improve public awareness and understanding of software **11**	that the software I develop is commercially successful **12**	that my workplace promotes my physical safety and psychological well-being **13**	that I do not discriminate against others when developing software **14**	that I know and apply industry rules when developing software **15**
that I make my own decisions when developing software **16**	that I personally achieve high quality in software design and production **17**	to uphold, promote and respect the principles of my industry **18**	to be an honest and trustworthy colleague **19**	Vic For cutter v 1

Less Important   More Important

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