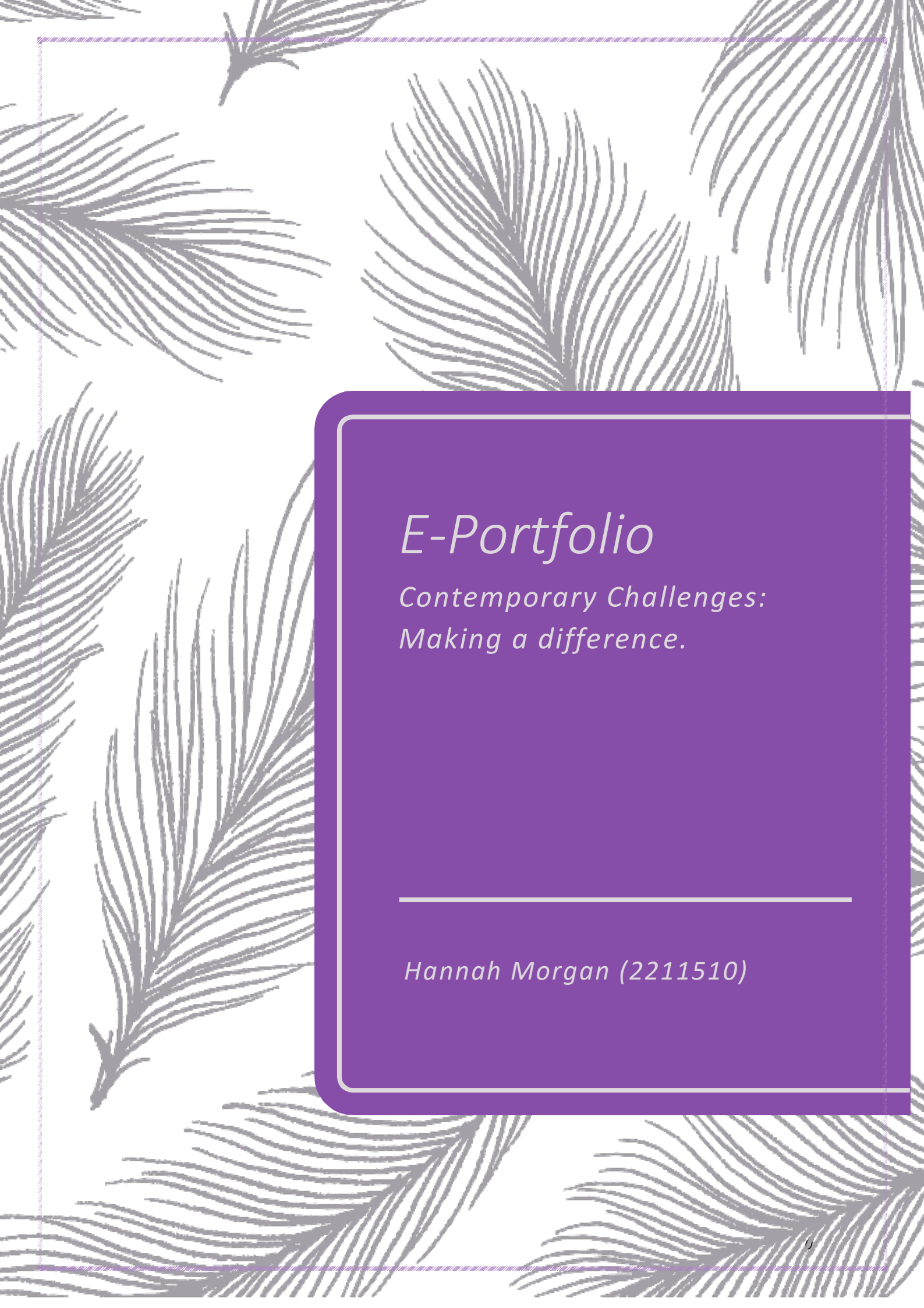




E-Portfolio

*Contemporary Challenges:
Making a difference.*

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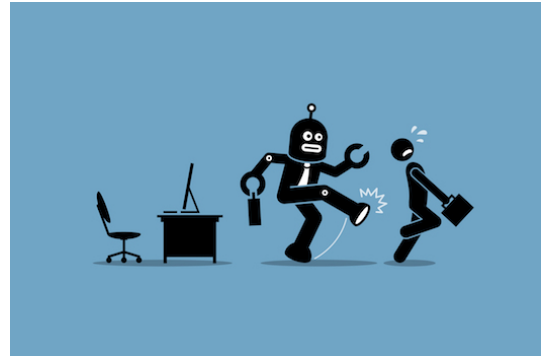
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The Rise of Machines, The fall of Humanity.

In the modern world we live in today it's a rarity to find an individual that has no access to any technological or computational device. They are everywhere we go, from ordering food



at restaurants to Pharmacy Dispensary Machines, it's great news for advances in science but what does it mean for us, The Human Race?

"Machines replacing humans in the workplace has been a perpetual concern since the Industrial Revolution". (Brown, 2020.)

Since before the years of technological advances, the anxieties concerning machines have always been present. The first recorded dis-concern about the automation of jobs dates to the Luddite Movement in the 1800's. "Workers sent threatening letters to employers and broke into factories to destroy the new machines, such as the new wide weaving frames. They also attacked employers, magistrates, and food merchants." (The National Archives, N.D). So why is this still relevant in 2023?

Although it's still widely believed and written about in numerous articles, The belief that robots are still taking over a large number of jobs may only be half of the truth.

"Robots to have a negative effect on middle-skill jobs, especially routine middle-skill jobs, and no effect necessarily on low-skill jobs". (Dahlin, 2019.)

Dahlin believes that jobs such as Janitors, Cooks, Housekeepers would not necessarily be in danger of automation. However, jobs that require routine or systematic approaches seem to be at higher risk. However, “As machines evolve and acquire more advanced performance capabilities that match or exceed human capabilities, the adoption of automation will pick up” (Manikya, 2017.) Possibly meaning that no one, and no job is safe.

Another Area that is being highly affected by the rise of machines and technology is the world of art. Typically for Artists and those who study art, it's a form of expression, no two pieces will be the same as they are crafted by humans and each human is unique. However, this is no longer the case, one of the biggest trends of today is Artificial Intelligence (AI) generated Art and it's not just drawings, These AI generators can now conduct music, film scripts, essays and more.

Typically, it will take an artist an immense amount of time and investment to complete a piece of artwork. Therefore, when an AI is capable of producing artwork that is of an acceptable standard to many in a fraction of the time and cost, it is likely to be preferred over human-produced art.
(Wright, 2023)

So, to conclude the rise of machines has not only posed threats to mankind in the past, but the further advances we make increases the threat to not only automation of jobs but creativity and maybe even life as we know it.

Rage Against the Machine.

So, we have learnt about the threats and concerns about our ever-developing machinery and technology, but in a world where anyone can make a website how do we know that this is the truth? As a university student we have learned the importance of 'critical thinking' which is the process of logically evaluating things and looking at the bigger picture. However other skills may be needed to be successful in promoting dealing with this wicked problem.

Firstly, we need to understand the difference between Misinformation and Disinformation, Misinformation happens day to day in our lives, people can get things wrong, or information can be entered incorrectly by accident on data sheets, but Disinformation is the intentional act of providing false or biased data, Propaganda is a good example of disinformation.

It is also important to be aware of two terms; An Echo-Chamber "A social epistemic structure from which other relevant voices have been actively excluded and discredited" (Nguyen, 2020) and Epistemic bubbles which are "A social epistemic structure in which other relevant voices have been left out, perhaps accidentally" (Nguyen, 2020). By using our critical thinking, whilst looking at the Automation of jobs it can become quite clear that certain researches are echo-chambers due to the fact that they deliberately have left out other relevant data such as the improvement of jobs due to machinery.

A great technique to use as well as critical thinking is the six honest men based on a poem written by Rudyard Kipling, whilst looking at

information think to yourself who wrote it? What is its purpose? When was it written? Where is it published? Why did they write it? How does it apply? By thinking about each one deeply it helps to evaluate if the source is reliable.



This technique could also be used to promote dealing with this wicked problem in education “to give a deeper understanding of the problem and some insights as to why it is happening. These ideas then become the starting point for a plan to address the issue.” (Sloane, 2017).

In the authors opinion the way to tackle this problem and come up with solutions in the world of education would be to use the six honest men in two formats, The first being using them to evaluate the sources that tell us machinery is a threat and the second being using the six questions as a format to solve the problem,

For Example:

- What is happening?
- Who does technology affect?
- How is it affecting us?
- Where is this most affecting?
- When is this happening?
- Why is this happening?

After following this technique and using critical thinking to answer each question about the wicked problem in education It is a starting point to efficiently bring about awareness and start to rationalise and evaluate possible solutions to said problem.

So, now we have learnt about what threats the rise of machinery poses and how is the best way to evaluate and problem solve them, now we need to think about what challenges dealing with these threats in an education setting might cause?

DESIGN THINKING: A non-linear process

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graph LR; Empathize --> Define; Define --> Ideate; Ideate --> Prototype; Prototype --> Test; Test -.->|Learn about users through testing| Empathize; Test -.->|Test reveals insights that redefine the problem| Define; Prototype -.->|Test creates new ideas for the project| Ideate; Prototype -.->|Learn from prototypes to spark new ideas| Ideate;
```

The diagram illustrates the Design Thinking process as a non-linear sequence of five stages, each represented by a blue circle: **Empathize**, **Define**, **Ideate**, **Prototype**, and **Test**. Solid arrows indicate the primary flow from one stage to the next. Dashed curved arrows represent feedback loops that allow the process to iterate:

- A dashed arrow from **Test** back to **Empathize** is labeled "Learn about users through testing".
- A dashed arrow from **Test** back to **Define** is labeled "Test reveals insights that redefine the problem".
- A dashed arrow from **Prototype** back to **Ideate** is labeled "Test creates new ideas for the project".
- A dashed arrow from **Prototype** back to **Ideate** is labeled "Learn from prototypes to spark new ideas".

Following the Plattner design above, It gives you a 5 step process to creatively solve problems, However it may not be as simple as just following the steps as it may only work for 'tame' or 'well-defined' cases.

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the design process.” (Iskander, 2018.) Meaning that although the process does empathise with the problem its true purpose is to help the person who wants to solve it.

Another problem with design thinking is many people do not appreciate the linear approach, however adapting the model to what needs need to be met first can be easily done and provide an even better model for problem solving.

To conclude, Design thinking can be a helpful process, but has its controversies. Many people think that design thinking is out of date, out of the box and too linear, yet people still use and adapt this method to date. In an education setting a simplified version of this template may be helpful and give pupils a good starting point to analyse problems and use their critical thinking.

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