



Edinburgh Napier
UNIVERSITY

School of Computing,
Engineering & the
Built Environment

Artificial intelligence in career services

Skills
Development
Scotland

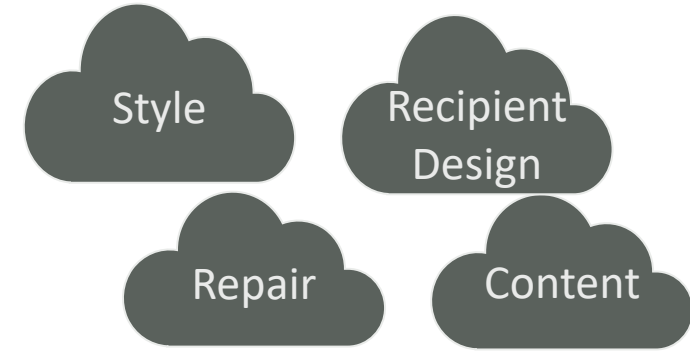


Scottish
Graduate
School of
Social
Science

Sgoil Cheumnaichean Saidheans
Sòisealta na h-Alba

Marianne Wilson – m.wilson2@napier.ac.uk

PhD Research Problem



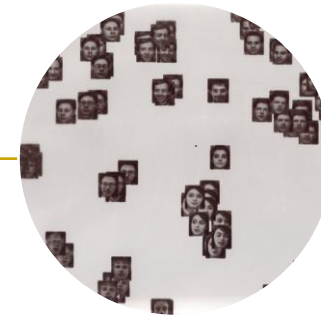
Determine a **useful** application for chatbots to support **SDS's services** for young people



Defining AI



Artificial Intelligence

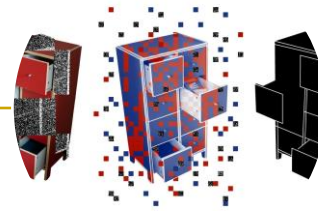


Data

- Generated from 'real world'

Algorithm

- Identify patterns (training)
- Detect patterns (previously unseen data)
- Predictions
- (outputs)



Humans

- Developers
- Data labelling
- Output correction

Image credits: Main Image: Anton Grabolle / Better Images of AI / Human-AI collaboration / CC-BY 4.0

Data Image: Philipp Schmitt & AT&T Laboratories Cambridge / Better Images of AI / Data flock (faces) / CC-BY 4.0

Algorithm Image: Anton Grabolle / Better Images of AI / ClassificationCupboard / CC_BY 4.0

Humans Image: Nacho Kamenov & Humans in the Loop / Better Images of AI / A trainer instructing a data annotator on how to label images / CC-BY 4.0

AI in Practice

NOËMA

The Exploited Labor Behind Artificial Intelligence

NewScientist

Artificial intelligence training is powered mostly by fossil fuel

Most AI training relies on electrical grids primarily powered by coal than low-carbon sources, according to an analysis of 95 AIs

ational worker organizing

The Economist

Menu Weekly edition Search

sky news

Artificial intelligence can now pick out transplant organs 'more effectively than what human doctors can see'

The new method developed by experts uses AI and its "memory" of tens of thousand of images of donor organs to identify those that offer the best chance of transplant success.

Business | Intelligence services

Investors are going nuts for ChatGPT-ish artificial intelligence

Even Elon Musk wants his own AI chatbot

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The Guardian

News website of the year

News Opinion Sport Culture Lifestyle More

Business Economics Banking Money Markets Project Syndicate B2B Retail

Artificial intelligence (AI)

From retail to transport: how AI is changing every corner of the economy

NEWS

Home Cost of Living War in Ukraine Coronavirus Climate UK World Business Politics Tech

Technology

Amazon scrapped 'sexist AI' tool

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<https://news.sky.com/story/artificial-intelligence-can-now-pick-out-transplant-organs-more-effectively-than-what-human-doctors-can-see-12822714>

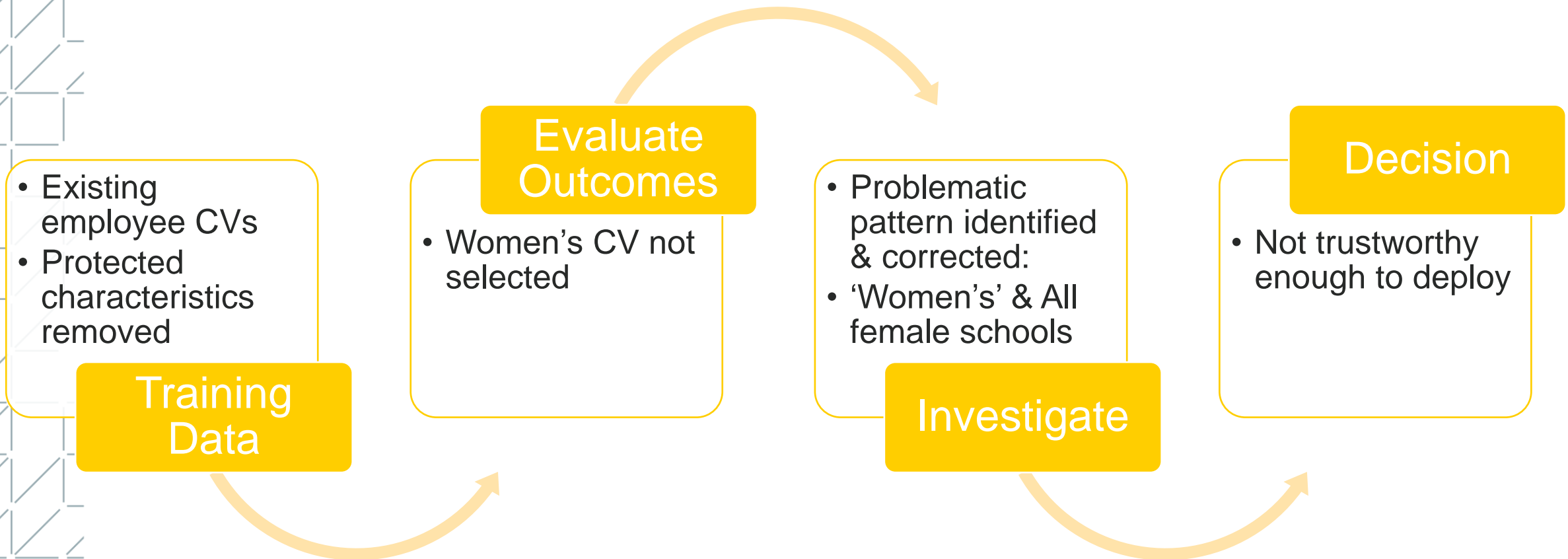
<https://www.economist.com/business/2023/02/28/investors-are-going-nuts-for-chatgpt-ish-artificial-intelligence>

<https://www.newscientist.com/article/2361343-artificial-intelligence-training-is-powered-mostly-by-fossil-fuels/>

<https://www.theguardian.com/technology/2023/feb/18/from-retail-to-transport-how-ai-is-changing-every-corner-of-the-economy>

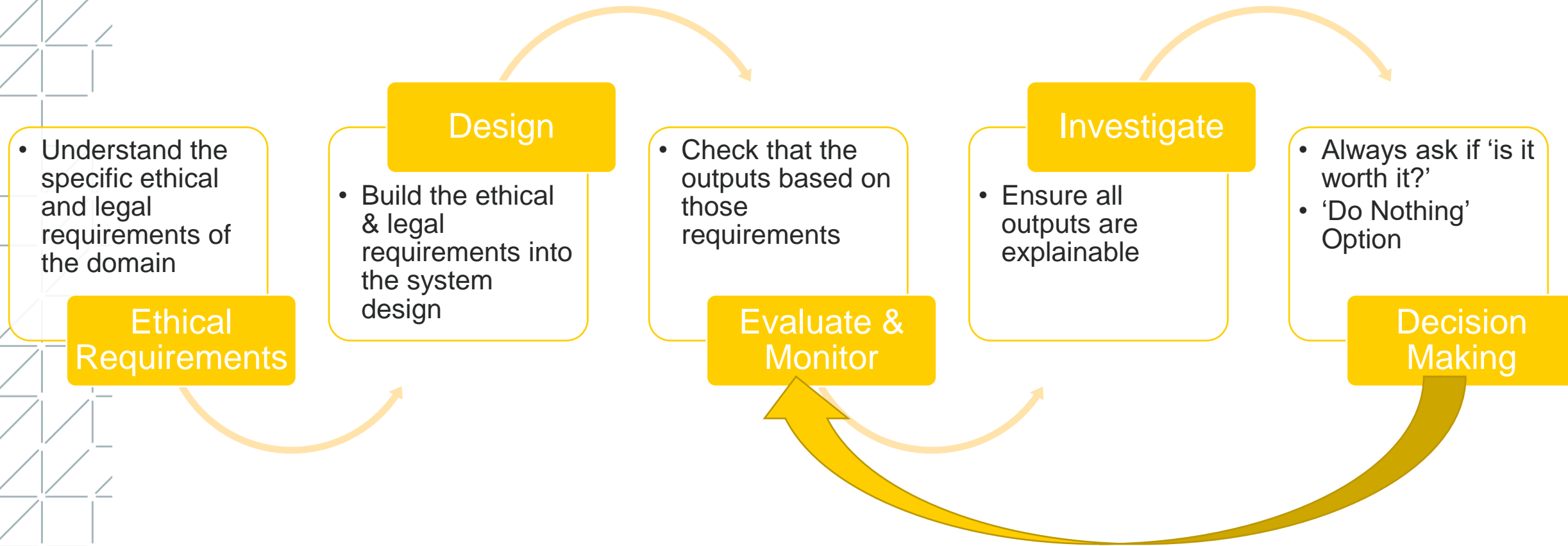
<https://www.noemamag.com/the-exploited-labor-behind-artificial-intelligence/>

Amazon Recruitment Case Study



- <https://www.bbc.co.uk/news/technology-45809919>
- <https://www.reuters.com/article/uk-amazon-com-jobs-automation-insight/amazon-scrap-secret-ai-recruiting-tool-that-showed-bias-against-women-idUKKCN1MK08K?edition-redirect=uk>

Ethics by Design



What and Who?



The Current 'Do Nothing' Option

CS Chatsonic Prompts library

M How did chatsonic develop the 'career counselor' personality?

CS The 'career counselor' personality was developed using the latest advances in natural language processing technology. Our technology allows us to process and analyze large amounts of data, so that we can understand the context of conversations and provide valuable career advice. We also use AI algorithms to identify trends in the job market, so that we can suggest career paths that are in demand. Finally, we use sentiment analysis to assess the speaker's interests and experience, so that we can recommend careers that best match their skills and qualifications

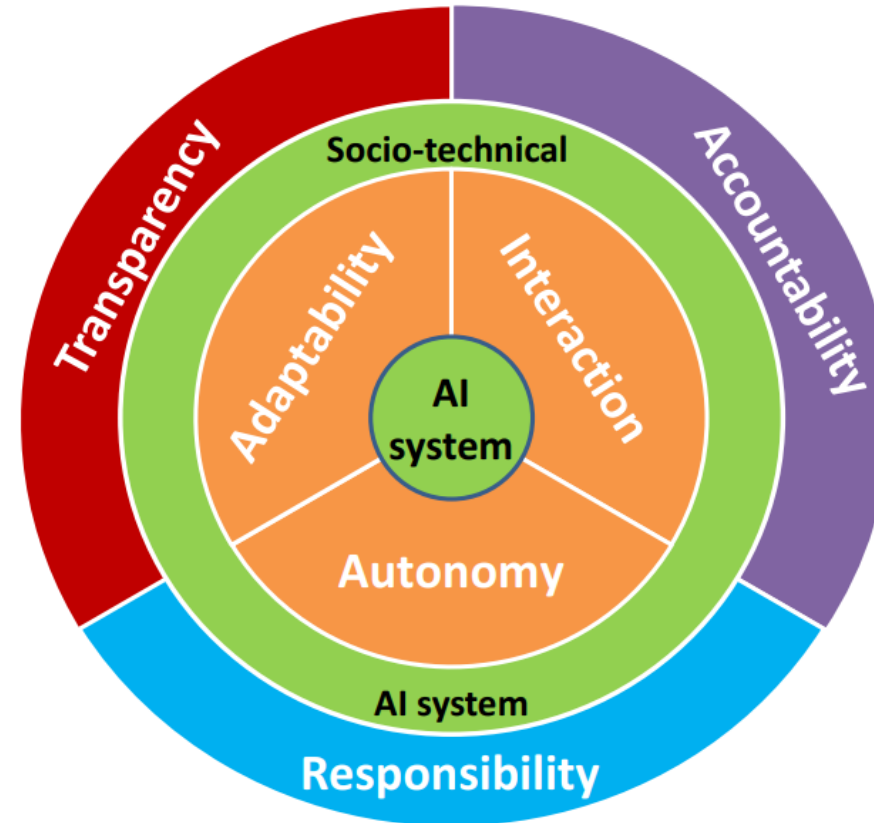
- General AI
- English Translator
- Interviewer
- Travel Guide
- Stand-up Comedian
- Motivational Coach
- Relationship Coach
- Poet
- Philosopher
- Astrologer
- Career Counselor**
- Personal Trainer
- Accountant

Include latest Google data

Current personality: **Career Counselor**

<https://writesonic.com/chat>

Where to go from here?



Dignum, V. (2017). Responsible Artificial Intelligence: Designing AI for Human Values.

https://www.itu.int/dms_pub/itu-s/opb/journal/S-JOURNAL-ICTF.VOL1-2018-1-P01-PDF-E.pdf

Further Reading

[Wilson, M., Robertson, P., Cruickshank, P., & Gkatzia, D. \(2022\). Opportunities and risks in the use of AI in career development practice. *Journal of the National Institute for Career Education and Counselling*, 48\(1\), 48–57.](#)

<https://www.linkedin.com/pulse/what-we-need-talk-when-ai-regulatory-purposes-virginia-dignum/>

<https://news.sky.com/story/artificial-intelligence-can-now-pick-out-transplant-organs-more-effectively-than-what-human-doctors-can-see-12822714>

<https://www.economist.com/business/2023/02/28/investors-are-going-nuts-for-chatgpt-ish-artificial-intelligence>

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