

EMERGING RESEARCH IN ANN: VIEWS

Maria Ingold
12693772
Unit 8
Machine Learning
University of Essex Online
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Personalising User Experience with Neural Networks

Pruciak (2021), referred to as 'Mach (2021)' in the assignment, provides a high-level description of neural networks and their industry application. His most relevant example to media and entertainment is personalisation of user experience, as seen in Steck et al.'s (2021) deep learning in Netflix recommendation systems.

Artificial Neural Networks (ANNs) connect neurons with an input and output layer (Kubat, 2021). Other than the simplest they also include one or more hidden layers in between, with multiple layers indicating deep learning.

Personalisation with recommendations helps users find relevant content but can risk users seeing only similar content and not discovering something new. Netflix note that deep learning could amplify recommender system weaknesses, for instance short term objectives could be misaligned with longer term objectives, such as user satisfaction (Steck et al., 2021). Furthermore, Gonzalez et al. (2022) show that recommendation models can demonstrate bias, such as in the MovieLens 1M recommendations providing better predictions for males and older users.

Centre for Data Ethics and Innovation on AI and Personal Insurance

The Centre for Data Ethics and Innovation (2019) snapshot paper on 'AI and Personal Insurance' discusses insurers evaluating Artificial Intelligence (AI) for decision making. However, concerns include privacy around data collection, personal risk of being uninsurable, and intrusive advertising.

I am further concerned about rejection of non-standard cases. Grenfell fire in 2017, for example, killed 72 people due the use of flammable cladding (Casciani, 2024). Unfortunately, the responsibility and cost has not been placed on cladding creators, or property developers, but on individuals, with many residents with Grenfell-style cladding unable to sell or afford tenfold increases to their premiums (Gregory, 2024).

The European Union (EU) AI Act protects individuals using risk-based classifications (Flamind & Sonner, 2024). For insurance, it categorises use of AI into four categories:

- 'Minimal risk' such as search or document classification.
- 'Limited risk' such as chatbots.
- 'High risk' like underwriting and pricing must keep a human in the loop.
- 'Unacceptable risk' includes banning social scoring and biometric data.

This regulatory protection of human rights above unchecked innovation is one of the key reasons I support the EU AI Act.

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