# **SOLID West:** Ethical and Legal AI







# I asked chatGPT a question...



What are seminal papers on AI in healthcare?



There are several seminal papers that have influenced the development and application of Al in healthcare. Here are a few examples:

- "Automated cervical cancer screening from cervical smear images using deep learning" by Deepu Vijayasenan et al. (2020) - This paper describes a deep learning model for the automated detection of cervical cancer from cervical smear images, and demonstrates the potential for AI to improve the accuracy and efficiency of cancer screening.
- 2. "Development and Validation of a Deep Learning Algorithm for Detection of Diabetic Retinopathy in Retinal Fundus Photographs" by Zhou et al. (2016) - This paper describes a deep learning algorithm for the detection of diabetic retinopathy, a common complication of diabetes that can cause blindness, and shows how Al can be used to improve the accuracy and speed of disease diagnosis.

- 3. "Development and Validation of a Deep Learning Algorithm for Improved Detection of Lymph Node Metastases in Women With Breast Cancer" by Willemijn M. A. Suykerbuyk et al. (2020) - This paper describes a deep learning algorithm for the improved detection of lymph node metastases in women with breast cancer, and highlights the potential of Al to improve the accuracy of cancer diagnosis and treatment.
- 4. "A Deep Learning Algorithm Using Digital Pathology Images to Predict Cancer Patient Survival" by Joelle K. Jay et al. (2018) - This paper describes a deep learning algorithm for predicting cancer patient survival using digital pathology images, and demonstrates how AI can be used to personalize cancer treatment and improve patient outcomes.

These papers are just a few examples of the many influential works that have shaped the development and application of AI in healthcare. They demonstrate the potential of AI to revolutionize the way we diagnose and treat disease, and highlight the need for ongoing research and development in this field.

### Risks specific to Generative AI

# Safety/ Transparency In the wrong hands, the ease of use of generative models can encourage unsafe use of Al Intellectual Property Generative models utilize existing IP, generate new IP, and create new scenarios

#### create new scenarios for misattribution of IP

Fraud
Generative models lower the barrier to entry
for creating high-quality fakes, supporting
existing and new forms of fraud

#### Saturation

As Al-generated content proliferates, the pool of training data fed into subsequent models become saturated with [Algenerated] outputs from its predecessors



Poster created in Midjourney to

promote the San Francisco Ballet's

"Nutcracker" performance

Application

#### Technical Limitations



Images created by DALL-E for prompt 'a teacup under a cylinder'



on common sense reasoning tests

#### Bias

Association, topic, style, word choice and other biases present within training data will also be learned by the model

#### Stochastic Parrot

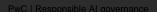
Large language models lack true topic comprehension and are prone to producing only what is statically best associated with a prompt

#### Fact Hallucination

Models are not enabled by an underlying source of truth and will confidently generate incorrect answers



Generative AI technology is still 5 —10 years away from being acceptably robust to substitute the end-to-end creation process



## Plenty for legal specialists to consider in the use of GenAI

1 Who owns the

Who owns the output of AI systems?

2

How do we handle third party utilization of our data in these models?

3

How do we ensure high quality (and accurate) output? What liabilities are we exposed to by incorrect outputs?

4

How do we comply with a litany of emerging regulatory requirements and a patchwork of standards efforts?