## Tutorial 11 - AlphaFold2 & NLP

Kevin Dick, PhDc Biomedical Engineering Carleton University

Friday 4<sup>th</sup> December, 2020

#### Disclaimer: Recorded Tutorials will be Publicly Posted

**Goal:** to create a companion series of applied machine learning tutorials for the 100MLB text, these tutorials will be publicly posted as a YouTube playlist. **Privacy Preservation:** 

- Ask questions in the chat<sup>1</sup>
- Keep video off

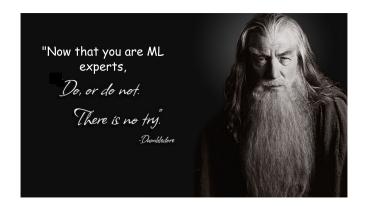
**Note:** If the above *hinders your ability to learn*  $\land$  *violates your privacy*, please let me/Dr. Green know ASAP and video will be post-processed accordingly.

<sup>&</sup>lt;sup>1</sup>I encourage unmuted/voice-based questions at any time, but know that this isn't explicitly privacy-preserving

# leFinal Tutorial All Good Things (Come to an End) - Nelly

#### It's Not Gooodbye, It's See You Later

It's a dangerous business, SYSC4906, going out your door. You step onto the road, and if you don't keep your feet, there's no knowing where you might be swept off to.



## ML Weekly

Recent news events from the ML community

#### ML Weekly

1. (NLP) DeepMind's AlphaFold2 "Solves" a 50-year-old Grand Challenge in Biology



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- 4. Protein folding (amino acid sequence to 3D structure: 10<sup>143</sup> conformations (Levinthal's paradox)
- 5. Prediction now "as good" as X-Ray Crystallography (\$120,000 and approx. 1 year!)

#### Into the Notebooks we Go...

We will cover two notebooks today!

- 1. Natural Language Processing Basics & Transformers
- 2. Topic Modeling Notebook

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