# Raymond Y. Xu

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# **Skills**

Machine Learning, Python, Tensorflow, NLP, CNNs, C++, Bash, Linux

# **Technical Experience**

## **Machine Learning Software Engineer**

Google — Mountain View

May 2022 - Present

- On Google assistant NLP team for language parsing improvement on voice commands.
- · Improved large language BERT model embeddings for understanding similar queries on new text parses.
- Created ML pipelines for running experiments for new model features.

Google — Kirkland, WA / Remote

October 2020 - May 2022

- On the Document AI product team, developing NLP products for analyzing text on forms and other documents.
- Primary work was on ML entity extraction, ML infrasctructure and testing.
- Pretrained BiLSTMs on big data for improved performance using spatial features on invoices.
- · Improved automation for machine learning training pipelines through scripting.
- Brainstormed and conducted experiments to improve fine tuning and tokenization elements of the modeling pipeline.

Founder April 2020 - October 2020

Denread — Remote at Antler Incubator

- Built chrome extension, Denread, allows users to click a website paragraph to drop down similar web text.
- Universal sentence encoder & approximate nearest neighbor search for NLP feature comparison.

## **Machine Learning Perception Engineer**

July 2018 - May 2020

Johns Hopkins Applied Physics Lab — Laurel, MD

- · Worked on small teams on Navy research contracts related to imaging software and visual based navigation.
- Led an internal research project to capture underwater images and extract depth information.
- · Created a orientation prediction network, predicting which way boats were facing based on images of them.
- Designing and improving web and offline auto-annotation tools for detection, segmentation, and orientation.
- Built detection systems for boats in long range infrared imagery in C++, training models in tensorflow.

# Other Experience

### Volunteer Program Manager

October 2020 - March 2021

Humanity Forward — Part Time, Remote

· Coordinating calls voters for political candidates and calls to small businesses for petitions.

#### Education

#### Cornell University, College of Engineering, Ithaca, NY

Master of Engineering in Electrical and Computer Engineering Bachelor of Science in Electrical and Computer Engineering

2018

2017

# **Personal Interests**

Political Activism: Calls, door knocking during election cycles

July 2018 - Present

Classical Guitar: Performed at Cornell's 13<sup>th</sup> president inauguration faculty reception, Cornell Perkins Prize

Rap: I rap & make rap music, here is my Spotify artist page