

# Larry Law ☑🌐🌐

Research Engineer, DSO National Laboratories



## RESEARCH INTEREST

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Natural Language Processing and Machine Learning

## EDUCATION

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- **National University of Singapore** Aug 2018 - May 2022  
*Bachelor of Computing in Computer Science; First Class Honours*

## HONOURS AND AWARDS

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- Dean's List ×2 Jan 2021 - May 2021; Jan 2022 - May 2022
- Invited to the Turing research programme by A/P Bryan Low and Professor David Hsu Jan 2021
- Placed on the University Scholar's Programme (USP) Honour Roll Aug 2019 - May 2020

## WORK EXPERIENCE

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- **DSO National Laboratories** May 2021 - May 2022  
*NLP Research Intern, supervised by Dr Chieu and Prof Lee Wee Sun*
  - Proposed **rationalized co-training: a variant of co-training that encourages agreement between the rationales of the classifiers' predictions.**
  - Experiments on two datasets showed that rationalized co-training **reduced the error rates** of the partially and fully supervised models **by 32.3%**. This reduction **outperformed that of vanilla co-training by 8.51%**.
  - **Short paper submitted for review for NAACL 2022.** ([Paper here](#))
  - Implemented hierarchical attention networks using **PyTorch and HuggingFace.**
- **National University of Singapore** May 2020 - May 2021  
*Research Assistant, supervised by A/P Bryan Low*
  - Proposed to **integrate non-myopic bayesian optimisation with network morphism for neural architecture search** ([Thesis here](#)).
  - Implemented network morphism research paper using **PyTorch**. Neural networks augmented with network morphism **converged 67% faster** than vanilla networks.

## PROJECTS

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- **Automatic Github Issue Labeller** Mar 2021 - May 2021  
*CS4248: Natural Language Processing*
  - Published a Github Action that uses **NLP to automatically label github issues** ([Demo here](#)).
  - **Fine-tuned BERT** with scraped github issues. Deployed model using **Docker**.
  - Labeller is **used by the WING-NUS research group**, led by A/P Min-Yen Kan.
- **DuckieNet** Aug 2020 - Nov 2020  
*CS2309: Research Methodology*
  - Proposed **DuckieNet**, a model which **integrates planning with Semantic Segmentation for Goal-Directed Autonomous Navigation in Crowded Environments.** ([Demo here](#))
  - DuckietNet cleared **2/6 maps** and **21 obstacles more** than our baseline without semantic segmentation.

## PROGRAMMING SKILLS

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- **Languages:** Python, Javascript, Java, Bash
- **Technologies:** PyTorch/TensorFlow/Keras, HuggingFace/AllenNLP, Scikit-Learn/pandas/numpy, Docker, React

## RELEVANT COURSEWORK

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- **Computer Science:** NLP, Information Retrieval, Deep Learning, Artificial Intelligence (AI), Uncertainty Modelling in AI, Machine Learning
- **Mathematics:** Discrete Mathematics, Calculus, Linear Algebra I & II, Probability, Statistics, Mathematical Analysis I