

# Ling Lu

## Machine Learning + Data Science Intern

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[github.com/linglu66](https://github.com/linglu66)

Education	<b>B.E. Systems Engineering 3.94/4</b> <i>University of Toronto (2021)</i> <i>Minor in Artificial Intelligence</i> Clubs: Software Dev/UI Lead – DesignForX (Consulting), Boxing Club	
Experience	<b>Machine Learning Engineer Intern / Dessa</b> Python, Keras, Data Engineering, Git, Test Driven Development <ul style="list-style-type: none"><li>● Lead development of a <b>production-level OCR machine learning pipeline</b> to read handwritten and typed text from cheque images at <b>98% test accuracy, using a CRNN model</b></li><li>● Increased automation rate of cheque processing by 50% at a major international brokerage using state of the art <b>object-detection</b> model to identify cheques in documents</li><li>● Trained <b>fake Trump Tweet generator and classifier</b>, and developed web application game for guessing Real vs Fake tweets in HTML, CSS, JavaScript, and jQuery</li><li>● <b>Designed UI/UX for flagship product</b> Foundations Atlas; conducted user interviews, created flows, wireframes and high-fidelity mockups</li></ul>	May 2019 to Current
	<b>Data Scientist Co-op / Royal Bank of Canada</b> Python, Keras, Spark, Kubernetes, Tableau <ul style="list-style-type: none"><li>● Implemented a <b>time-series model (bi-LSTM)</b> in Python and Tensorflow used to anticipate employee attrition to 73%, saving up to <b>\$1.4M</b></li><li>● Engineered features on over <b>three billion rows of time-series data</b> using PySpark</li><li>● Drove <b>development of new cybersecurity metrics</b> with data analysis and insights</li></ul>	May 2018 to Aug 2018
	<b>Machine Learning Researcher / University of Toronto</b> Python, Tensorflow <ul style="list-style-type: none"><li>● Modelled and solved a traditional large-scale retail pricing problem with <b>reinforcement learning (deep Q-learning)</b>, where performance exceeded historical profits by 43%.</li><li>● Used Pandas and Sklearn to preprocess data in Python for data analysis &amp; machine learning.</li></ul>	May 2017 to Aug 2017
Personal Projects	<b>FacetoFace - Facial Emotion Change with GANs</b> Implemented GANs (IP-CGAN) to change facial expressions from neutral to happy, surprised and sad in <b>PyTorch</b>	May 2018
	<b>Thief Sheep Game AI – UofTHacks</b> Developed multiplayer <b>web-based Python game</b> and created UI assets. Designed passive game AI movement and behaviour using statistical distributions.	Dec 2017
Skills	Python, SQL, Excel, Git, Java, Matlab PySpark, Pandas, Keras, PyTorch, Tensorflow, Scikit-learn, Tableau	
Awards	2 <sup>nd</sup> Place, HealthTech – National Business and Tech Conference 2017 Top 10/200 – Orbis AI challenge 2018	