

Christopher Leung

SOFTWARE ENGINEER · MACHINE LEARNING RESEARCHER

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Skills

LANGUAGES Python, Java, C++, Scala, C, R, Shell Script, SQL, VBA

TECHNOLOGIES Tensorflow, Keras, scikit-learn, pandas, SciPy, Matplotlib, Storm, FlumeJava, Hadoop, Spark

Work Experience

OKTA

Toronto, ON

Machine Learning Engineer

Jun. 2019 - Present

- Translating researched machine learning models into the production codebase.
- Releasing a feature that learns user typing habits and reports anomalous behaviors using researched algorithms.
- Designed an algorithm that beats the anomaly detection state-of-the-art algorithm in runtime and memory consumption.

GOOGLE

Mountain View, CA

Software Engineer Intern

Sept. 2018 - Dec. 2018

- Explored and implemented state-space search and state-of-the-art reinforcement learning algorithms from research papers.
- Improved precision-recall curve by **more than 0.1%** over existing models to detect malicious advertisers in Google Search.
- Designed a modular, distributed architecture to work with **hundreds of millions of data samples** using FlumeJava.

OKTA

Toronto, ON

Software Engineer Intern

May 2018 - Aug. 2018

- Built a model that can identify users through typing habits with an **accuracy of over 90%**.
- Researched new unsupervised machine learning models for improving account takeover detection.
- Integrated a feature collection mechanism into the Okta SignOn product and the data pipeline.
- Presented a proof of concept to stakeholders using Principal Component Analysis and Contour Plots.

IBM

Markham, ON

Software Developer Co-op

Sept. 2016 - Apr. 2017

- Implemented a mutex-like API to handle concurrent file access requests between multiple servers. Designed a system to pre-empt locks based off a time quantum to account for server failures.
- Designed, built, and maintained a data pipeline that automatically tests the product installer by using Java.
- Implemented a Slack bot using the Slack API to post installer statistics into team Slack channels.

Projects

HARMONE

- Ongoing research endeavour and large project focusing on unsolved research directions in Music Information Retrieval.
- Tackling the problem of AI music composition. Building with many popular Python deep learning libraries.

LOW RANK RECONSTRUCTION

- Created an algorithm to perform a lossy compression on a dataset using a decision tree based method.
- Currently working on regularization implications and actively working on publishing to a conference.

Extracurricular

UNIVERSITY OF WATERLOO DATA SCIENCE CLUB

Waterloo, ON

Vice President

Jan. 2018 - Apr. 2019

- Leader for Neural Networks Workshop: Taught introductory Reinforcement Learning to over 70 people.
- Presented Okta's identity data mining endeavors in collaboration with Okta's lead Data Scientists.

Education

STANFORD UNIVERSITY

Online

Artificial Intelligence Professional Certificate

Dec. 2019 - Present

- Enrolled Courses: XCS244N (NLP)

UNIVERSITY OF WATERLOO

Waterloo, ON

Bachelor of Computer Science, Honours

Sept. 2013 - April 2019

- CS Courses: ML, AI, Statistical Learning Theory, Neural Networks, Distributed Systems