# Christopher Leung

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*3 Years in ML Engineering, 16 Months of Internship Experience, Graduate Student & Researcher.*

## Skills

**Languages** Python, Java, C++, Scala, C, R, Shell Script, SQL, VBA
**Technologies** PyTorch, Tensorflow, SparkSQL, Airflow, scikit-learn, Storm, FlumeJava

## Experience

**Meta AI** *Canada Remote*
Software Engineer, Machine Learning *July 2022 - Present*
- Graph algorithm research for Modern Recommender Systems on the AI Applied Research Relevance team.

**Pinterest** *Toronto, ON*
Machine Learning Engineer *May 2021 - July 2022*
- Created a "tier-1" ranking model from 0->1 which led to greater than double-digit conversion gains for all Pinterest surfaces (Homefeed, Search, Related Pins, Related Products). Was the largest conversion gain for Pinterest in 2021.
- Trained and tuned a multi-headed conversion model with approximately one billion conversion samples to model the probability of conversion after clickthrough for shopping pins. Created with Tensorflow and migrated to PyTorch.
- Worked with PinLabs to integrate SOTA features (BERT embeddings, etc). Included over 70 different features.

**Okta** *Toronto, ON*
Software Engineer (Machine Learning) *June 2019 - April 2021*
- Designed and implemented a machine learning pipeline to detect cyberattacks on client organizations.

**Google** *Mountain View, CA*
Software Engineer Intern *Sept. 2018 - Dec. 2018*
- Improved and optimized existing machine learning model to better detect malicious advertisers in Google Search.

**Okta** *Toronto, ON*
Software Engineer Intern *May 2018 - Aug. 2018*

**IBM** *Markham, ON*
Software Developer Co-op *Sept. 2016 - Apr. 2017*

## Education

**Georgia Institute of Technology**
Master of Science in Computer Science *In Progress*
- Specialization in Machine Learning - Cumulative GPA: 4.0/4.0
- Theory of Mind Research at the Design and Intelligence Lab supervised by Dr. Ashok Goel.

**University of Waterloo**
(Hons) Bachelor of Computer Science *June 2019*

**Stanford University**
Professional Certificate in Artificial Intelligence *In Progress*
- Graduate Courses Completed: NLP, NLU

## Research Projects

**Listener-Reasoning Speaker** *Short Paper*
Title: Pragmatic Learning via Listener-Reasoned Utterance Augmentation.
- Invented a meta-learning technique that solves Stanford's Color Reference task with 94.5% accuracy, beating SOTA by 8%.

**Cost-Balancing Clustering Tree** *Long Paper*
Title: Test-Cost Sensitive Methods for Identifying Nearby Points *arxiv: 2010.03962*
- Solved a new problem in budget-constrained data repair with a proposed Markov Decision Process framework.
- Proposed deep reinforcement learning algorithm which outperforms random policies in the context of cost-based data repair.