

# HYUNSU CHO

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## Experience

- **Lead Maintainer** of XGBoost project. 2016–Present.  
XGBoost is an efficient, scalable library for gradient boosting. Available at <https://github.com/dmlc/xgboost>. Over the years, I made substantial contribution to the core C++ portion of XGBoost, including a new histogram-based tree training algorithm. I also built and have maintained a continuous integration server (<https://xgboost-ci.net>) using Jenkins. The server runs a variety of tests targeting multiple data infrastructures (dask, Apache Spark) and NVIDIA GPUs. Starting version 0.70, I have been in charge of making releases and successfully published 7 releases.
- **Applied Scientist**, Amazon Web Services. January 2018–Present.  
I was part of initial efforts to launch [Amazon SageMaker Neo service](#) in November 2018. Neo is a service that lets users optimize machine learning models and deploy to the cloud and various edge devices. My intern project, Treelite, (see below) was crucial in expanding the scope of Neo to include decision tree models, where originally it only aimed to support neural nets. I also helped a number of internal and external customers to deploy and speed up their machine learning models. I am also familiar with the TVM stack, the deep learning compiler.
- **Applied Scientist Intern**, Amazon Web Services. June–December 2017.  
I created the Treelite project, a model compiler/optimizer for decision tree ensembles. Available at <https://github.com/dmlc/treelite>.
- **Teaching Assistant**, Machine Learning Specialization at Coursera. 2015–2017.

## Education

**M.S. in Computer Science and Engineering**, University of Washington, Seattle, WA

- September 2015 – March 2018
- Advisor: [Carlos Guestrin](#)
- Research area: machine learning systems

**B.S. in Computer Science and B.S. in Mathematics**, Trinity College, Hartford, CT

- September 2011 – May 2015

## Awards and Honors

- **Best Short Paper Award**, ACM SIGIR 2019, Paris, France, July 25, 2019.
- **Winner of Outstanding Undergraduate Researcher Award**, Computing Research Association, 2015.
- **Recipient of the Goldwater Scholarship**, The United States Congress, 2014.

## Selected Peer-Reviewed Publications

- Theodore Vasiloudis, Hyunsu Cho, and Henrik Boström. “Block-distributed Gradient Boosted Trees,” *ACM SIGIR 2019*, Paris, France, July 25, 2019. Best Short Paper Award.
- Hyunsu Cho and Mu Li. “Treelite: toolbox for decision tree deployment,” *SysML 2018*, Stanford, CA, February 16, 2018.
- Lin Cheng, Hyunsu Cho, and Peter Yoon. “An Accelerated Procedure for Hypergraph Coarsening on the GPU,” *IEEE High Performance Extreme Computing Conference*, Waltham, MA, September 16, 2015.