# Christophe P Gyurgyik

PhD Candidate in Computer Science, Stanford University







#### **Education**

Stanford University

2023 - Present

Doctor of Philosophy Candidate, Computer Science

2018 - 2021

Cornell University

GPA: 3.904

Bachelor's Degree, Computer Science Minor, Science & Technology Studies

## **Conference Publications**

ASPLOS 2023

"Stepwise Debugging for Hardware Accelerators"

Griffin Berlstein, Rachit Nigam, Christophe Gyurgyik, and Adrian Sampson.

## **Workshop Publications**

**WOSET 2021** 

"A Toolkit for Designing Hardware DSLs"

Griffin Berlstein, Rachit Nigam, Christophe Gyurgyik, and Adrian Sampson.

## **Experience**

## XLA Compiler Team, Google

2021 - 2023

Focused on compiler support, extensibility, and optimization for the Accelerated Linear Algebra (XLA) Tensor Processing Unit (TPU) compiler. Achieved x% improvements to *end-to-end weighted latency* of large language models through compiler optimizations. Acquired C++ readability within 2 months. Authored over 150,000 lines of code and reviewed over 100,000 lines of code. Received one spot bonus and two peer bonuses.

#### Undergraduate Research Assistant, Cornell University

2020 - 2021

Part of the Computer Architecture & Programming Abstractions (<u>CAPRA</u>) group, led by Adrian Sampson. Under the supervision of Rachit Nigam, worked on <u>Calyx</u>, a compiler infrastructure for languages that target hardware accelerators. Achievements include shepherding the Calyx dialect into <u>CIRCT</u> and introducing multiple frontends used to guide language design and provide useful benchmarks.

## Software Engineering Intern, Google

2020

Primarily entailed simplifying the storage of ad events from two separate stores to one using a new, generic remote procedure call service. Received two peer bonuses.

#### Engineering Practicum, Google

2019

The primary goal of this internship was to optimize the core database implementation of Sawmill Logs, an exabyte-scale data lake that supports internal Google analytics. Achieved improvement in the compression ratio by 10-15% for certain log storage types with minimal performance reduction.

# Teaching Assistant, CS2110 OOP and Data Structures, Cornell University

2019

Facilitated weekly recitations for 40 students and held office hours to assist students in the course.

# United States Marine Corps, Department of Defense

2013 - 2017

Served honorably in both leadership and instructor roles. Promoted 4 times in 4 years, and then obtained the rank of Staff Sergeant (E6) during the first promotion cycle after the end of active duty service. Received numerous awards for leadership and academic excellence.

## **Awards**

Big Red Vets, Land Grant	2020

# Volunteering

Cornell University Veteran Undergraduates Association	2018 - 2021
Student Veterans of America	2019
Institute for Human Services	2017
AccesSurf	2017
Girl Scouts of the USA	2017
Hawaii Humane Society	2017

# Languages

English, French

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