

Krystal Maughan

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Research Interests: Differential Privacy, Compilers, Neural Networks

EDUCATION

University of Vermont, PhD candidate

2019-present

Area: Programming Languages Research

Data Privacy, Programming Languages, Neural Networks

Skills: Haskell, Python, LaTeX, Jupyter, Git

RELEVANT WORK EXPERIENCE

Teacher's Assistant, Fall 2019 (Vermont)

2019

Programming with Matlab (taught by Radhakrishna Dasari)

Data Privacy (taught by Joe Near)

Mercury (San Francisco)

2019

Wrote Haskell back-end application for stealth fintech startup as software intern

Used Haskell, Stack, Yesod, Nix, Postgres. Supervised by Max Tagher. (Summer)

Apple, Inc. (Sunnyvale)

2019

Software Intern (Spring)

Google Summer of Code for Haskell.org (remote)

2018

Wrote Debugging tools for CodeWorld¹,

A Google project sponsored by Haskell.org, under

Supervision of Chris Smith (Google) and

Gabriel Gonzalez (Awake Security).

Used Haskell, GHCJS, Cabal.

Mozilla, Increasing Rust's Reach (remote)

2018

Worked on Implied Boolean Predicates²,

For Command line tools in Rust, under

Supervision of Aaron Power and Ed Page.

Worked in Rust, used Travis Continuous Integration

¹ CodeWorld: <https://github.com/google/codeworld/commits?author=kammitama5>

² Assert Predicates.rs: <https://github.com/assert-rs/predicates-rs/commits?author=kammitama5>
Assert Cmd.rs: https://github.com/assert-rs/assert_cmd/commits?author=kammitama5

MERIT-BASED GRANTS / SCHOLARSHIPS

Code2040 2020 Finalist	2019
Helium Grant (chosen as 1 of 11 out of 700)	2018
EaRI Career Scholarship, (R Data Science Scholarship) - declined offer	2018
Udacity Bertelsmann Data Science Scholarship - declined offer	2017
AT and T Aspire to Tech grant Winner	2017
NCAS Workshop participant (NASA Community College Aerospace Scholars)	2016
Who's Who/ Peggy Williams Memorial Scholarship/ Best BFA Award (Best of Major)	2008

OTHER GRANTS/ FELLOWSHIPS

Sage-Days-104 (St. Louis University): To work on SageMath Software	2019
Simons Institute (Berkeley) Error-Correcting Codes and High-Dimensional Expansion Boot Camp (attendee)	2019
ICERM (Brown University) Encrypted Search Workshop Grant (Lodging provided)	2019
Cornell Number Theory Conference Grant (Lodging provided)	2019
MSRI (Mathematical Sciences Research Institute) Grants to attend Connections for Women:	2019
- Derived Algebraic Geometry, Birational Geometry and Moduli Spaces workshop	
- Introductory Workshop: Derived Algebraic Geometry and Birational Geometry And Moduli Spaces	
NASA L'Space NPWEE Concept Proposal writing programme participant	2019
NASA L'Space Proposal/Review Academy (patentable research proposal for funding)	2019
NASA L'Space Academy (virtual team & mentorship with NASA scientists Level 1)	2019
Racket Summer School (National Science Foundation Grant)	2018-2019
PLMW (Programming Languages Mentorship Workshop)	2018
ICFP (International Conference Functional Programming)	
PLMW(Programming Languages Mentorship Workshop)	2018
PLDI (Programming Languages Design and Implementation)	
OPLSS (Oregon Programming Languages Summer School Grant) - declined offer	2018

Developer Conference Grants to attend: Twilio's Signal Conf 2019, Curry On! 2019, RustConf 2018, LambdaConf 2017/2018, Strange Loop 2017, Software Craftsmanship North America (SCNA), Clojure Conj 2016/2017, Clojure West 2017, Chrome Dev Summit 16-18, Google IO 2016-2019

SERVICE

Student volunteer, ICFP (International Conference Functional Programming)	2018
Student volunteer, PLDI (Programming Languages Design and Implementation)	2018
Student volunteer, POPL (Principles of Programming Languages)	2018

MENTORSHIP

Google Developer Student Club Lead (for University of Vermont)	2019
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RESEARCH TALKS

"Personalized Robotic Control using MISL" for UVM/CS++ Research Day 2019

PUBLICATIONS / POSTS

Google Summer of Code [*"Breaking the Time-Space Barrier with Haskell"*](#) 2018

INDUSTRY TALKS

"Magic Gnomes: A GHC Compiler talk (5-minute talk at Github for Sentry's Show & Tell) 2019

"Denotational Semantics" (2 minute Lightning Talk for Meetup group) 2018

"Recap of Google I/O 2018" (20 minute presentation at Google Developer Group LA) 2018

SCHOOL TALKS

CS Crew GSoC talk (20-minute talk about Google Summer of Code and Internships) 2019

CS293 Technical Interviewing Workshop Talk 2019

CLASSES TAKEN (PhD)

Software Verification; taught by David Darais using Agda (Fall) 2019

Data Privacy; taught by Joe Near using Python (Fall)

Computer Human Interaction; taught by Josh Bongard (Fall)