Krystal Maughan

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Research Interests: Differential Privacy, Compilers, Neural Networks

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EDUCATION

University of Vermont	***2019-present***
PhD Candidate (Fall)	

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)

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 CodeWorld[1],
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 Predicates[2],
For Command line tools in Rust, under
Supervision of Aaron Power and Ed Page.
Worked in Rust, used Travis Continuous Integration

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[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

Helium Grant (chosen as 1 of 11 out of 700)	2018
EaRl 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

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 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

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*

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*

CLASSES TAKEN (PhD)
Software Verification (Fall)   *2019*
Data Privacy (Fall)
Computer Human Interaction (Fall)