Samuel Grayson

(512) 354 6602
sam@samgrayson.me
samgrayson.me
samgrayson
charmoniumQ
1078199

Technical Skills

Languages (experienced)	Python, Java, C/C++, Javascript, Lisp, SQL
Languages (competent)	Rust, C#, Haskell, Ruby, Scala, Go
Other	Hadoop, Apache Spark, Keras, POSIX Shell, Kubernetes, Docker
Completed courses	AI, Machine Learning, Natural Language Processing, Advanged Algorithms, Data Structures, Quantum Mechanics, Quantum Computing

Education

Aug 2019–May 2025 **Ph.D. in Computer Science**, *University of Illinois at Urbana-Champaign*.

Aug 2015–May 2019 **B.S. in Computer Science with minor in Physics**, *University of Texas at Dallas*, (major: 3.7).

Employment

Aug 2019–Present **Research Fellow**, *University of Illinois at Urbana-Champaign*.
- Implementing a cache coherence protocol in an architectural simulator.

May 2019–Aug 2019 **Software Engineering Intern**, *Facebook*.
- Designed and implemented an internal tool (reaching hundreds of users) that improved the machine learning process for ads.
- Reference: Xiaoyu Chen xochen@fb.com (said I "exceeded expectations")

May 2018–Aug 2018 **REU Student**, *Illinois Institute of Technology*.
- Designed a prototype database in a unikernel-inspired hybrid runtime for high-performance computing
- Achieved 1.2x speedup relative to Linux, in certain cases
- Project source code
- Reference: Kyle Hale khale@cs.iit.edu

May 2017–May 2018 **Software/Machine Learning Intern**, *Snowfall Technologies*.
- Designed, implemented, and tested hybrid content- and collaborative-filter for product recommendations with 60% precision
- Created and maintained the CI/CD pipeline, deploying to a Kubernetes cluster on AWS
- Reference: Stephen Fox Stephen.Fox@hpe.com (called me "rockstar intern")

Aug 2016–May 2017 **Computer Science Mentor**, *UT Dallas Computer Science Mentor Center.*

- Tutored the fundamentals of C, C++, Java, Unix and discrete mathematics
- Wrote my own publicly available curriculum
- Reference: Vanessa Dixon Vanessa.Dixon@utdallas.edu

May 2016–Aug 2016 **Software Engineering Intern**, *The Home Depot.*

- Developed and implemented an algorithm for finding a user's location in a store based on the WiFi signal-strength
- Project presentation
- Reference: Stacy Devino

June 2015–Aug 2015 **Software Engineering Intern**, *Silicon Labs.*

- Ported and debugged example C code for microcontrollers
- Used lab equipment (multimiters, oscilloscopes, soldering irons, etc.) to test development boards
- Reference: Stephen To Stephen.To@silabs.com

Jun 2014–Aug 2014 **Lab assistant**, *at University of Texas.*

- Created proof of concept for locating an object with radars and reconstructing its trajectory
- Designed a system for remotely collecting radar data reducing collection time by 75% (using C, Raspberry Pi SOCs, and Python)
- Reference: Hao Ling

Publications

Jun 2018 Joseph Vade Burnett, Sam Grayson, Zachary Sullivan, Richard Van Natta, and Luke Bang, **"Arithmetical Functions Associated with the k-ary Divisors of an Integer,"** *IJMMS*. https://doi.org/10.1155/2018/9349245.

Posters and talks

Nov 2018 Sam Grayson, **"NautDB: Towards a Hybrid Runtime for Processing Compiled Queries,"** Poster. *SC'18* Link

Feb 2017 Sam Grayson, **"Creative Thinking in Math Class"** Talk. *TEDxUTD.* https://www.youtube.com/watch?v=IQqb8HfN5hw

Awards and Honors

Sep 2019 ARCS Fellowship

Jun 2019 College of Engineering Fellowship at University of Illinois at Urbana-Champaign

Jun 2019 SURGE Fellowship at University of Illinois at Urbana-Champaign

May 2019 Graduated Cum Laude from UT Dallas

Aug 2015 Academic Excellence Scholarship (full-tuition scholarship) at UT Dallas

Dec 2014 Eagle Scout (Troop 3, Austin TX)

Contributions to Open Source Projects

- Dask [contribution]
- Gem5 [contribution]