SAMUEL TAY

4222 4th Ave NE, Seattle, WA 98105

samtay.github.io | samtay | (631) 291-3866 | sam.chong.tay@gmail.com

education

B.A., Mathematics & Scientific Computing — 2009 - 2013
Kenyon College — Gambier, OH

Thesis: *Logic via Algebra.* Awarded distinction.

GPA: 3.91

Class Rank: 16/409

work experience

Teaching Assistant — September 2019 - June 2020
University of Washington — Seattle, WA

Write lesson plans and lead recitation classes for undergraduate probability and statistics courses.

Take graduate classes such as Statistical Inference, Network Optimization, Graphical Models, Machine Learning, Programming Language Theory.

Languages: Coq, Python, R.

Backend Software Engineer — December 2018 - September 2019
SimSpace Corporation — Remote

Created a realistic network simulation product for cybersecurity training.

Leveraged advanced type system features to achieve a high level of code safety.

Languages: Haskell, SQL.

Technologies: AWS S3, Docker, Kubernetes, Minio, PostgreSQL.

Full Stack Developer — August 2017 - September 2019
Wrinkl Inc. — Remote

Developed a websocket-driven chat application, supporting web, iOS, and Android apps.

Languages: Haskell, Nix, SQL.

Technologies: Hydra, NixOS, PostgreSQL, Reflex-Platform.

Software Developer — April 2017 - August 2017
ExpandShare — Charleston, SC

Built core features and microservices for a Learning Manage System within Django.

Languages: Python, Javascript.

Technologies: Angular, Django.

Applications Engineer May 2014 - February 2017
Blue Acorn Charleston, SC

Developed reusable modules in an object oriented MVC eCommerce framework.

Founded an educational Functional Programming group with weekly meetups.

Led an agile team and mentored junior developers.

Languages: PHP, Javascript, Bash.

Technologies: KnockoutJS, Magento, MySQL, RabbitMQ.

research experience

Research Assistant Summer 2011
AstroParticule et Cosmologie Paris, France

Conducted research investigating the correlation of temperature variation and phase noise for LOT (LISA On Table), an optical simulator for the LISA mission, under Dr. Hubert Halloin.

Research Assistant Summer 2010
Valparaiso University Valparaiso, IN

Explored pattern avoidance in ternary trees in a team of three undergraduate students under mentor Dr. Lara Pudwell.

technical skills

Programming Languages

Fluent in Haskell, Python, PHP, Javascript.

Experience with Bash, C, C++, R, Ruby.

Mathematical Software

R, Maple, Mathematica, Matlab.

Other Technologies

Kubernetes, Docker, Ansible, RabbitMQ, Postgres, MySQL.

honors & awards

Phi Beta Kappa Society
Pi Mu Epsilon National Mathematics Honor Society
Newman's Own Foundation Scholarship 2009-2013
Zakov Family Scholarship 2011-2013
John H. Dunlap IV Scholarship 2012-2013

Funding for deserving mathematics majors who have demonstrated excellence in the programming and/or use of computer applications.

Reginald B. Allen Prize 2013

Annual award to a student who the professors of the Department of Mathematics decide has done the most outstanding work in mathematics.

Reginald and Bessie Allen Memorial Fund 2011-2012

The income assists a student having exceptional promise in mathematics who is recommended by the chair of the Department of Mathematics.

Wendell D. Lindstrom Memorial Prize 2011

Award for extraordinary work by first or second year students in mathematics.

MAA Outstanding Presentation Prize, Joint Mathematics Meeting 2011

publications

Nathan Gabriel, Katherine Peske, Lara Pudwell, and Samuel Tay. 2012. "Pattern Avoidance in Ternary Trees." *Journal of Integer Sequences* 15:12.1.5.