Samuel Chong **Tay**

Software Engineer · Mathematician

852 Centerwood Drive, Charleston, SC 29412

(631) 291-3866 | sam.chong.tay@gmail.com | samtay.github.io | samtay | sam-tay | algebra4life

Summary

Skillful problem solver with a background in pure mathematics and a passion for functional programming. 3+ years experience in web development, backend/infrastructure, and devops. Proven ability to quickly ramp up on new languages/technologies. Efficiency nerd who loves Vim, Linux, and xmonad, and enjoys customizing the development environment. Interested in learning new technologies and tools to solve complex, challenging problems.

Experience

Software Developer
ExpandShare

Apr 2017 - Present

Charleston, SC

- Build microservices for core LMS application in Python
- Leverage tools and libraries such as AWS, S3, RabbitMQ, and AngularJS

Applications Engineer
Blue Acorn

May 2014 - Feb 2017

Charleston, SC

- Streamlined deployment pipeline across the organization.
- Founded an educational Functional Programming group with weekly meetups.
- Achieved the most "Play of the Sprint" awards in 2015.
- Promoted from Apprentice to Senior within two years for exemplary work quality.

Research Assistant
AstroParticule et Cosmologie

Summer 2011

Paris, France

- Conducted research and data analysis in 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
Valparaiso University

Summer 2010

Valparaiso, IN

- Explored pattern avoidance in ternary trees (combinatorial mathematics) in a team of three undergraduate students under mentor Dr. Lara Pudwell.

Skills

Development
- Agile experience in both scrum and kanban, along with Jira, Workfront, and ZenHub.
- Experience leading an agile team and mentoring junior developers.
- Very efficient workflow from requirements gathering to development execution.
- Experience with direct client interactions and discussing complex technological details with nontechnical stakeholders.

Languages
- Fluent in Haskell, Python, PHP, Javascript.
- Experience with Bash, C, C++.

Software
- Mastery of Magento.
- Experience with technologies such as Docker, Vagrant, Ansible, NodeJS, Express, Django, MySQL, RabbitMQ.

Workflow
- Proficient in Linux and MacOS.
- Enjoy maximizing productivity with development tools such as git, vim, tmux, xmonad, zsh, ngrok.

Education

Kenyon College
B.S. in Mathematics and Scientific Computing

Gambier, OH

Sep 2009 - May 2013

- Awarded Distinction on Senior Thesis
- Achieved GPA of 3.91

Publications

Pattern Avoidance in Ternary Trees
Nathan Gabriel, Katherine Peske, Lara Pudwell, and Samuel Tay

Journal of Integer Sequences

Dec 2011

http://arxiv.org/abs/1110.2225