Zhiyan Foo

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Employment **Quantcast, Software Engineering Intern** – Worked on optimizing the performance of a Django app that downloaded and filtered data related to running automated advertising campaigns, and then loaded them into an internal file format used by the company. (03/2017 to 06/2017).

Army – Singapore Armed Forces, 02/2015 to 02/2017. (Conscription)

Languages (extensive) python (5+ years); (learning) Haskell; (basic level) C, Java, Scheme, LaTeX;

Projects **crunch-shake** – A python library that evaluates scripts on the Bechdel Test and other similar metrics.
Source Code : https://github.com/zhiyanfoo/crunch-shake/.

Additional Relevant Coursework **Real Analysis, Convexity and Optimization** – *Harvard Extension School.*
- Upper-division pure math course focused on optimization problems with convex sets, normed infinite-dimensional vector spaces, and convex functionals.

Learning From Data – *Caltech telecourse.*
- Introductory Machine Learning course focused on mathematical rigor. Machine Learning algorithms built (almost) from scratch include Percepton with Stochastic Gradient Descent, hard-margin Support Vector Machines and Logistic Regression. For hard-margin SVM, an external convex optimization package was used.
- Source Code :
https://github.com/zhiyanfoo/caltech-machine-learning/

Algorithms on Strings – *Coursera, University of San Diego.*
- String compression and search algorithms e.g. Suffix Trees, Burrows-Wheeler Transform and Knuth-Morris-Pratt.

Complete list of coursework done can be found at
https://zhiyanfoo.github.io/learning/.

Education **University of Waterloo** – Bachelors of Mathematics (2017 – Ongoing)