

# Longqi (Rocky) Cai

Software Engineer interested in Machine Learning  
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<http://misaka-10032.github.io>

## EDUCATION

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- **Carnegie Mellon University** Pittsburgh, PA  
*M.Sc. in Information Technology Strategy (3.87/4.00)* Sep. 2015 - Dec. 2016
- **Fudan University** Shanghai, China  
*B.Sc. in Computer Science and Technology (3.64/4.00)* Sep. 2011 - Jul. 2015

## EXPERIENCE

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- **Glow, Inc** San Francisco / Shanghai  
*Software Engineer* Jul. 2014 - Jul. 2015
  - Contributed 18k lines to Glow app, 8k lines to Nurture app, 4k lines to internal library.
  - Customized fancy UI widgets and animation.
  - Set up internal Maven center with Archiva and Gradle.
  - Integrated Google Now API, including both server and client side OAuth2 flow.

## REPOSITORIES

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- **Caffe Exts** *Extended Caffe as Independent Study*
  - Integrated Message Passing Interface (MPI) for distributed training.
  - Implemented fast Hough Transform Layer for powerline detection task.
- **Halstm** *Class project for Parallel Programming*
  - Implemented Long-Short Term Memory (LSTM) with Halide.
  - Made use of multi-thread execution and vector ALUs.
  - Improved CPU performance by 2x speedup, compared with Caffe.
- **Alg** *Hobby / self-paced learning*
  - Implemented commonly used algorithms and data structures with Python.
  - Including hash map, min/max/med heap, avl/red-black tree, order statistics, graph traversal.
- **ML/BigML/PGM** *Accomplished ML assignments*
  - Implemented machine learning algorithms, some with Big Data frameworks.
  - Including SVM, SVR, Logistic Regression, Decision Trees, HMM, LDA, sampling methods.
  - Naive Bayes with Hadoop; Sparse Logistic Regression with Spark; Distributed Matrix Factorization with Spark; LDA with Parameter Server.

## LANGUAGE

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- **Python** lover; experience with machine learning, algorithm, data processing/analysis.
- **Java** experience with Android and Big Data; **C++** experience with Caffe extensions; **Shell** experience with batch processing; **Makefile/CMake/Gradle** experience with project setup; **HTML/Javascript/CSS** experience with short demos; **Vagrant/Docker** experience with environment setup; **C/Assembly** experience with 15213; **CUDA** experience with 15418; **Latex** and **Markdown** experience with documents.