Longqi (Rocky) Cai

https://misaka-10032.github.io

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Experience

- **Google, Inc** — Mountain View, CA
  Software Engineer — *Mar. 2017 - Present*
  - Built the image segmentation pipelines for Google Pixel Camera.
  - Built the image search index for labeled products in Google Lens.
  - Implemented the pipeline for on-device face grouping in Google Photos.
- **Carnegie Mellon University** — Pittsburgh, PA
  Teaching Assistant — *Sep. - Dec. 2016*
  - Assisted Prof. William W. Cohen in the class *Machine Learning with Large Datasets*.
  - Improved the assignment *Approximate PageRank* by visualization on a cleaner dataset.
  - Designed the assignment *Phrase Finding on Spark*, helping students visualize the phrase cloud.
- **Glow, Inc** — Shanghai, China
  Software Engineer Intern — *Jul. 2014 - Jul. 2015*
  - Glow is a startup that cares about women's health, founded by Max Levchin.
  - Customized the UI widgets and the animations for better user experience.
  - Set up the internal Maven center, and extracted the common libraries.
  - Implemented the OAuth2 flow for the Google Now Integration.

Education

- **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*

Projects

- **Partical Systems** — Carnegie Mellon University
  Class project for Compute Graphics — *Dec. 2016*
  - Designed the abstraction of a particle system in Javascript.
  - Implemented two simulation examples based on this abstraction: fireworks and cloth.
- **Powerline Detection on Aerial Images** — Carnegie Mellon University
  Independent Study supervised by Prof. Kayvon Fatahalian — *Jun. - Aug. 2016*
  - Adapted Fully Convolutional Network to the task of line detection.
  - Implemented a fast Hough Transform Layer, improving convergence rate by 10 times.
  - Built a web visualization tool to diagnose and evaluate results.
- **Halstm** — Carnegie Mellon University
  Class project for Parallel Computer and Architecture Programming — *Apr. - May. 2016*
  - Implemented Long-Short Term Memory (LSTM) with Halide.
  - Exploited multi-thread execution and SIMD.
  - Improved the CPU performance by 2x speedup, compared with Caffe.

Skills

- Language: C++, Java, Python.
- Tools: Bash, Git, Mercurial, Bazel, Makefile, Markdown, Latex.