

# YIWEN SONG

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## EDUCATION

### UNIVERSITY OF CALIFORNIA, BERKELEY

B.A. Computer Science, College of Letters and Science

**JUNE 2016**  
MAJOR GPA: 3.739

#### COURSEWORK:

- Artificial Intelligence
- Machine Learning
- Algorithms
- Operating Systems
- Performance Computing
- Computational Biology

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## WORK EXPERIENCE

### OLD MISSION CAPITAL | Chicago, IL

#### *Trading and Data*

Aug 2016 - May 2017

- Tasked with improving the data pipeline and the research infrastructure for ease-of-use and higher reliability.
- Improved research library by implementing parallel data collection and automated validation to reduce overhead of studies.
- Developed a Python API for quickly scripting programs that run modeling and risk calculations on real-time market data.

### OLD MISSION CAPITAL | Chicago, IL

#### *Trading Internship*

June 2015 - Aug 2015

- Studied the effects of US-based high-speed trading on the liquidity of international markets.
- Used Scikit-Learn, and other Python tools to understand market trends by generating and visualizing statistical models.
- Wrote extensive research reports to communicate studies to team as well as traders whose products the results affect.

### FUNDTASTIC | Palo Alto, CA

#### *Loan Research Internship*

May 2014 - Aug 2014

- Researched and reviewed over 50 small business loans from various government and private lenders across the country.
- Worked closely with editors to ensure consistency in style and compliance with the company's writing guidelines.

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## PROJECTS

### GPU COMPRESSION

This is a parallel implementation of LZSS compression for GPU. The goal of this project was to test whether or it is feasible to compress messages in parallel HPC applications to decrease bandwidth usage and overall compute time. Unfortunately, your network needs to be real bad for this to be worth anything. The implementation was written in CUDA and deployed on AWS.

### IMGCOMPRESS

ImgCompress is a hackathon project aimed at becoming the future of compression. The algorithm works by uploading binaries to Imgur as PNGs and storing the 7 character Imgur URL. With a compression ratio of over 700 000, this is likely the single best compression algorithm in all the world: all in under 200 lines of Python. (Way better than the CUDA stuff I made.)

### POKER AI (HEADS UP POT-LIMIT OMAHA)

I attempted to build a Heads Up Pot-Limit Omaha (HUPLO) AI using Monte Carlo search trees and some sort of machine learning. The preflop play of the AI uses machine learning on features of the hole cards such as connectivity, suitedness, and raw value. The postflop play relies on the MCTS. While the AI is rather bad at poker, it is passable at Tic-Tac-Toe.

### SPORKLIST

SporkList is a web-app aimed towards the indecisive eater. Just as you can make playlist for music, SporkList is a playlist for food, shuffling up your restaurant library for you when you feel hungry and indecisive. SporkList was made using AngularJS and the now-defunct Parse.

### YET ANOTHER PERSONAL SITE | DEF DONT HIRE.ME

I'm not going to lie, I am awful at web development. Fortunately, technology has got me covered these days, since now literally anyone can go download Bootstrap and find a template, write some BS about themselves and call it a personal site. And that's exactly what I did.

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## INTERESTS, SKILLS & INTANGIBLES

Hobbies: Board Games, Poker, Basketball, Reading the Manual

Languages: Python, Psuedocode, C (Reluctantly), Mandarin

Skills: INDEX-MATCH Fiend, Vim Connoisseur, Nash Equilibrium Hobbyist, "sudo rm -rf /" Frequent User

Intangibles: Enjoys friendly competition, clicks buttons really fast, uses 🔥🔥🔥 liberally