**Ke (Mark) Ma**

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**EDUCATION**

**University of California, Berkeley** Berkeley, CA

*Bachelor, Computer Science, Statistics* June 2014

Technical GPA: 3.2

# COURSEWORK

**Math & Statistics:** Calculus, Discrete Math, Linear Algebra. Probability Theory, Modeling

**Computer Science:** Structure and Interpretation of Computer Programs, Data Structure, Machine Structure, Artificial Intelligent, Database

**Electrical Engineering:** Signal Processing, Circuits

# PROJECTS

**Scheme:** 1, Twenty-one game: A popular poker game with general Card Game engine.

2, Picture Language: Handle the pictures, and designed the functions to transform the pictures 3, Adventure game: An RPG game with textual UI, with A lot of different difficulties.

4, Logo Interpreter: Handling the LOGO programming language, simulating the compiler and interpreter.

**Java:** 1, A Drawing Program: Reading the file with the expression of the graph in PostScript. And plot the actual picture. 2, Blokus Duo Game Server and AI: A chess-like board game with 3 different AIs with different difficulties.

3, Graphs----a prototype of GPS: a prototype of GPS which read in the map and the instructions and compute and point the route. 4, MapReduce ---- A simulation of Small World game with emphasis on MapReducing Skill running Amazon EC2 Server.

**C:** 1, High-performance Matrix Multiply: Uses OpenMP and SSE to increase the performance 1000 times faster than the naive algorithm. 2, MIPS Instruction Set Emulator----Simulating the MIPS Instructions and execute them.

3, Logisim: Simulating the CPU with circuits

**Python:** 1, Searching AI for game Pac-man, with 4 different searching algorithms. 2, Machine Learning, natural language processing

**Ruby on rails:** 1, Email sorting system with data and token sorting algorithms, capable of sorting and categorizing over 0.2 million emails.

2, Twitter supporting system with database design, data sorting dash board and user managing system, in charge of handling 5 million user data.

**PostgreSQL:** 1, Implementing three different buffer management policies and modifying the source file of PostgreSQL.

2, High performance SQL query, PostgreSQL source file modification, shorten the working time of SQL query dealing 1-billion from 30 minutes to

50 seconds.

**Comprehensive:** Philanthropy Nexus----used by Global Philanthropy Forum, for user and organization management. Mainly handling the data sorting and hashing from the Salesforce data containing information over 4000 districts of the company, and design of web based graphic User

Interface.

# EXPERIENCE

**Global Philanthropy Forum** San Francisco, CA

*Software Developer* May 2012 - August 2012

* Developed the fully automated application of storing the information of over 4000 organizations of private donator and public foundation
* Successfully connect the application to the official Salesforce database of the company in order for the application to load in new files automatically

**China Unicom** Zhejiang, China

*Test Engineer* May 2009 - September 2010

* In charge of testing and maintenance for the system supporting over 0.5 million users.
* Basic working station installing and upperlevel designing.

# SKILLS AND INTERESTS

**Programming Languages:** Scheme, Java, C, C++, C# (intermediate), Python, Ruby on Rails, SQL, HTML5, OpenMP, Matlab, MIPS, EC2 cluster, Perl(intermediate), Lua(intermediate), PHP(basic)

**Operating Systems and Applications:** Windows, OS X, Unix, Linux, Ubuntu, LaTex, Eclipse, NetBeans, TextWrangler, Labview, Multisim,

Matlab

**Math:** Strong computing and analyzing ability, Probability theory, Modeling

**Computer Science:** Strong skill in Data Structure and Programming, Coding, Algorithm Design, Parallel Programming, User Interface Design.

**Language:** Fluent in Mandarin, English, and Cantonese

**Interests:** Basketball, Video Games, StarCraft(ranked top 1000 world wide on ICCup), StarCraft II(an average diamond player), Rock

Climbing, Skiing