Sixian Hong

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OBJECTIVE

Seeking fulltime Software Engineer position starting from July 2017 to contribute solutions to big problems

TECHNICAL SKILLS

- Proficient in C/C++, Python, Java, Matlab, SQL, Swift, LabVIEW, Latex, and Git
- Familiar with OpenMP, MPI, Verilog, and HTML

EDUCATION

University of Michigan — Ann Arbor, MI
B. S. E., Biomedical Engineering — **GPA: 3.94/4.00** — Apr. 2015
M. S. E., Biomedical Engineering — **GPA: 3.88/4.00** — Apr. 2017
Software Courses Databases, Parallel Computing, Artificial Intelligence, Algorithms, Machine Learning

Shanghai Jiao Tong University — Shanghai, China
B. S. E., Electrical and Computer Engineering — **GPA: 3.79/4.00** — Aug. 2015
Related Courses Data Structures & Algorithms, Computer Organization, Discrete Math, Probability

EXPERIENCE

Google Inc., Software Engineering Intern — Mountain View, CA
Python, C++, Machine Learning, Statistical Analysis, Unit Testing — May 2016 – Aug 2016

- Proposed, investigated, designed, and implemented hierarchical clustering to find feature patterns in Gmail abuse
- Trained clustering model and applied statistical analysis over large volume sensitive Gmail data
- Modified existing system to categorize real time Gmail spam, and validated program correctness using unit tests
- Provided abuse trend monitoring and identified patterns of spam campaigns based on real time traffic

PROJECTS (More projects and details listed on personal website)

Parallel Computing Using Multiple iOS devices — **Sole author, 1168 LoC**
Swift, iOS, Parallel Computing, Multithreading — University of Michigan, Fall 2015

- Designed a protocol for linking different iOS devices together as distributed-memory parallel computers
- Implemented a traveling salesman problem solver App on iOS devices using the protocol
- Decreased runtime by 47% for using two devices compared with running on single device

OpenCL Accelerated Application Control Based on Kinect Depth Data Processing — **Team leader (5 person)**
C++, OpenCL, Machine Learning, Linux Application — SJTU, Summer 2015

- Utilized depth data acquired from Kinect to decode user's gestures
- Achieved OpenGL-based particle system control according to the obtained gesture information
- Accelerated depth data processing by 13 times while lowered CPU usage by 24%

Property-Based Spike Sorting Using Machine Learning — **Sole Author, 1417 LoC**
Machine Learning, Statistics, Matlab, Data Processing — University of Michigan, 2014-2015

- Implemented an algorithm to select meaningful properties by unsupervised learning
- Applied k-means algorithm to cluster similar spikes together based on the unsupervised learning result
- Innovated statistical method to rearrange outliers by comparing to different groups' properties and shapes
- Achieved an accuracy of 99% for 12dB Signal-to-Noise Ratio simulated data

Further information on these projects and more can be found at my personal website: http://www-personal.umich.edu/~hongsx