YANG PAN

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2410 Shakespeare St. Houston Texas 77030

EDUCATION

Rice University Houston, Texas
Master of Computer Science *Aug. 2017 - Dec. 2018 (expected)*

Shanghai Jiao Tong University Shanghai, China
Bachelor of Science in Engineering, Automation *Sept. 2013 - June 2017*

EXPERIENCE

Performance and Capacity Engineer Intern, Facebook Menlo Park, California
Supervised by Hao Shang, Infrastructure Foundation Team *May 2018 – Aug. 2018*

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Research Assistant, Shanghai Jiao Tong University Shanghai, China
Advised by Prof. Jie Yang *Dec. 2016 – June 2017*

· Studied image hashing and retrieval algorithms on large data sets, especially data dependent supervised hashing.
· Introduced additional constraints to the optimization problem of Latent Factor Hashing (LFH), and applied two-stage optimization method to maximize the penalized log-likelihood function.
· Introduced nonlinearity in regression models, and compared them using Akaike information criterion (AIC).

SELECTED PROJECTS

MyDB Database System Houston, Texas
Supervised by Prof. Christopher Jermaine *Jan. 2018 – Apr. 2018*

· Implemented infrastructure of database system, including an LRU buffer manager and record management tools.
· Implemented two-pass multiway merge sort (TPMMS) algorithm, and B+ tree based on the infrastructure.
· Built an SQL front end with syntactic and semantic checking using flex and bison, together with a back end that excutes selection, projection, join (supporting scan join and sort merge join), aggregate and grouping operations.
· Implemented logical optimization using cost estimation, and physical optimization by annotating expressions.

Code Optimizer for ILOC Houston, Texas
Supervised by Prof. Keith Cooper *Sept. 2017 – Nov. 2017*

· Built a scanner with flex and a parser with bison for the intermediate representation language ILOC.
· Implemented local value numbering algorithm to reuse previously computed value, reducing about 8% of cycles.
· Implemented loop unrollling that unrolls inner loops by a factor of four, reducing about 5% of cycles.

Reliable File Transfer and Intra-Domain Routing Protocols Houston, Texas
Supervised by Prof. T. S. Eugene Ng *Sept. 2017 – Nov. 2017*

· Designed and implemented a reliable file transfer protocol on unreliable network, using cyclic redundancy check and sliding window, which could deal with up to 95% packet loss, duplicate, delay, mangle, and reorder.
· Implemented link-state (LS) and distance-vector (DV) routing protocols in C++ for intra-domain routing.

TECHNICAL STRENGTHS

Languages Proficient in C/C++, Python; Comfortable with Haskell, MATLAB, Verilog
Platforms Windows, macOS, Linux (Ubuntu)
Tools PyTorch, Keras, scikit-learn, OpenCV, MySQL, LaTeX, Multisim