SYLVAN ZHENG

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EDUCATION

BS Computer Science 2017
Yale University

TECHNICAL EXPERIENCE

Facebook Inc: Software Engineer (Civic Engagement) 2017-

Scaling a global political data infrastructure to multiple countries and thousands of politicians to power Facebook platform ballot and government information products, partnering with international and domestic non profit and governmental organizations.

Parallel Preprocessing for Deterministic Multiversion Concurrency (C++) 2016

Researching improvements to the Bohm model of deterministic multiversion concurrency control for database systems. Focus on parallelizing the preprocessing stage, eliminating a serial performance bottleneck in the previous design.

Facebook Inc: Software Engineer 2016

Scaling Facebook's internationalization platform database to utilize ElasticSearch in order to improve database query performance on user strings, language variations, and translations. Restructured search infrastructure to improve search accuracy and allow for more flexible feature development.

GRAINPLANE (Max/MSP/gen/Java) 2016

Design and construction of a novel musical interface for granular synthesis techniques, using realtime audio analysis with Cycling 74's Max. Paper published and presented at the AudioMostly conference in Norrköping, Sweden.

SYNPLAY (C++) 2016

Implementation of a cross-platform multireceiver audio streaming and synchronization network protocol, resistant to clock drift and packet loss

LATCHLOCKR (C++) 2016

Coordinated research investigating the performance characteristics of latch free vs conventionally latched lock managers in database management systems.

Exosumes: Lux | Ideas through Light (HTML5/JS/Ruby/Supercollider) 2015

In collaboration with Mark Saba, created a five minute projection piece for Yale's Beinecke Library featuring an algorithmic soundtrack informed by stochastic image processing.

TI-83/84+ Calculator Projects 2008-2012
www.ticalc.org/archives/files/authors/104/10456.html

Creator of multiple programs featured on ticalc.org, including complex RPG engines, primitive synthesizers, Cuberunner, and winner of the 2010 Omnimaga Programming Contest (AI driven ARPG). Most work done in Axe, a thin abstraction layer over z80 assembly.

Princeton Plasma Physics Lab 2013-2014

Researching the plasma speaker; determined key audio characteristics and behaviors using audio analysis tools in addition to high speed camera work.