Timothy Shiu

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github.com/timoweave
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Skills

Web Technologies
angular, ionic, react, redux, polymer, material, node, express,, mongoose, bcrypt, request, mocha, chai, jquery, bootstrap, foundation, material-ui, d3, cytoscape, underscore, python, django, iOS, leaflet, mapbox, oauth, passport, html, css, javascript

Development Tools
webpack, grunt, gulp, npm, bower, ionic, polymer, curl, httpie, live-server, sublime, emacs, xcode, json-server, chrome dev tool, restclient

Databases
mongo, sqlite, postgres, mysql, sql, json, pouchdb

Issue Tracking
mocha, chai, jasmine, travis-ci, gitlab-ci, bugzilla, github, gitlab, trello

Version Control Systems
git, p4, cvs, rcs, subversion

Web Services
heroku, docker, firebase, mlab

Experience

Full Stack Software Eng Hack Reactor San Francisco, CA 07.2016-10.2016

- Completed various MEAN/MERN full stack app projects at hack reactor, node.js, express.js, angular.js, mongodb, as well as react.js, where are used in projects listed belows.
- Created Future Insight App for school tour for future-insight.herokuapp.com
- Created Git Central App to analyze git commits histories. Git-central.herokuapp.com
- Created Mongo Databases for all app, on mlab for deploy and localhost for debug.
- Defined the node server, express routing middlewares, HTTP RESTful API/Routes to crud mongo database between back end server app and front end web app.
- Developed mocha and chai test suit to ensure data model is properly defined and used.
- Incorporated various frontend frameworks, angular, react, redux, polymer, material, ajax, async callback, and promise http request.
- Designed an efficient algorithms to improve speed and completeness of github api.
- Debugged troubles issues with heroku deployment, server restful api, package versioning.
- Using python flask server to handle static files, and bootstrap restful api server.

Sr R&D Eng Ausdia Sunnyvale, CA 12.2013-12.2015

- Developed on constraint coverage analysis of various inconsistent condition, absent associated constraint specification.
- Developed multi thread SDC constraint analysis, diagnostic, optimization of clock network.
- Developed multi-thread min cut partition to balance random parallel functional simulation.
- improved 10x run-time performance for debug_rule facilities for over 100 type of validations.
- Developed new feature, multimode check (multiple constraint scenarios, different set of clocks, constant, disable, false paths, clock sense, clock group, etc.,)
- Developed new feature sdc lint check, a super lint for SDC constraint lint checking with a lightweight and coherent semantic check against net-list and user and library constraints.
- Developed new feature scan chain check, load DFT scan chains from LEF/DEF file, and check for lockup latch issues.
- Developed new feature constraints merge, across multiple scenarios, transform, insert, or duplicated constraints among different constraints from different scenarios.
- Addressed customers issue such as diagnose performance, feature requests, and worked closely with product application engineers.
- Used python for regression result processing and run flask http server (backend) to deliver data driven regression web frontend running bootstrap and d3.

Sr R&D Eng Lorentz Solution Sunnyvale, CA 02.2013-11.2013

- wrote spice parser in python and lex/yacc, ast, and perform syntax direct translation
- Reduced lot of bugs of a product, high frequency design, by a net-centric mini layout-vs-schematic, where high performance done in C++ via PySide.
- Improved infrastructure for calbire svdb cci interface (library components, netlist, and gdsii)
- improved runtime performance, 10x faster, compiler/compiler modular approach for easy maintain and self contained nose/pytest unit test case.
- Supported AE customers, demo, software installation, and documentation
- Created spice python parser, ast, and code generator.
- Fixed Qt user interface bug, in dialog, shell interface, layout, event handling done in PyQt.
- Rewrite mission critical net-centric mini lvs to delivery 10x faster run time.

Software Eng Nebulian Techn. San Jose, CA 08.2012-01.2013

- Developed two iOS app for meetloop.com and taotaomom.com
- Integrated Core Data (multi thread), MapKit, RestKit, ShareKit, Three20, XMPP.
- Developed Django web site using models, views, templates
- Developed iOS mobile app with XCode and Django Web, meetloop.com & taotaomom.com
- Integrated various frameworks, Core Data (multi thread), MapKit, RestKit, ShareKit, Three20, XMPP (multi thread), WireShark
- Managed servers such as OpenFire jabber, MySql, OAuth2, and Apache.
- Developed Django web site using models, views, templates, with forms using Firebug, jQuery, and JavaScripts.

Sr R&D Eng I Synopsys Inc Mountain View, CA 08.2006-07.2012

- Developed Memory Pool Manager, System Verilog transpiler
- Developed emacs/elisp regression and analysis major and minor mode suites.
- Maintained Verilog, System Verilog, Qt, spice, and system task function.
- Enhanced ESP and Formality-ESP performance, fixed bugs

Sr Software Eng LSI Logic Inc Milpitas, CA 06.2004-08.2006

- Developed a static timing analysis (STA) tool, in which I wrote function evaluation, logic propagation techniques using boost.
- Developed a SDF parser in lex, yacc, and C++ STL.
- Built the SDC tcl interface using SWIG (script wrapper interface generator).
- Integrated the Verilog Cheetah reader in lsista (LSI STA).
- Developed a Power modeling engine which made use of probability propagation of signals, accounting for the function information of cells.
- Developed an electro-static discharge (ESD) Analysis Engine using asymptotic waveform evaluation (AWE).
- Developed a function-covering program to determine arc completeness of cell libraries.
- Developed fast reachability (dominating) and root-first-visit algorithm.
- Developed C/C++ SDC parser with lex, yacc, and boost for static timing analysis
- Developed an electro-static discharge (ESD) Analysis Engine & Power modeling engine

Education

M. Computer Eng.	Georgia Institute of Technology, GA	1998-2004
M. Computer Eng.	University of Michigan, MI	1997-1998
B. Electrical Eng.	McGill University, PQ	1992-1997