QING ZHOU
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A web application developer coming from an engineering background. I have work experience with JavaScript, PHP and MySQL. My current objective is to further mastering full-stack web development in the JavaScript environment. My interests primarily resolve around the MEAN stack and I'm passionate about extending creative solutions to emerging problems using web applications.

Technical Skills:

Languages: JavaScript, PHP, Python

Library/Frameworks: jQuery, Knockout, Angular, Express, Node JS, D3, Passport, Socket.io

Database: MySQL, MongoDB

EMPLOYMENT

Web Application Developer ***Odysys, Inc. (Bend, OR)*** **01/2016-09/2016**

Project: *Full-stack web application development using PHP, MySQL and JavaScript.*

Odysys is a company that offers a web application for hotel owners to accept reservations, perform online transactions and monitor their competitors' occupancy data. My major responsibility includes:

- Work with UI/UX designer to improve site usability and functionality
- Integrate third-party APIs including payment gateways (e.g., Stripe) and reservation channels (e.g., TripConnect), work with RESTful web services and parse data in both JSON and XML format
- Architect both the frontend and the backend of a user admin session of the application
- Search Engine Optimization (SEO) through the creation and submission of XML sitemaps
- Maintain the code base and provide onsite support for customers

R&D Engineer ***GenapSys, Inc (Redwood City, CA)*** **07/2015-01/2016**

Project: *Automation of NGS library preparation using digital pneumatic microfluidics (DPM)*

GenapSys focused on bringing to market an electronic DNA sequencer, a computer-controlled fully automated microfluidic system is under development to integrate library preparation steps into an iPad-size sequencer. As a member in the Research & Development team, I achieved the following milestones at GenapSys:

- Implement the chip and supporting instruments
- Program valve and heating system control on LabVIEW
- Demonstration of functionality: Fully automated DNA library generation from chip

SIDE PROJECTS (SELECTED)

Front End Development

Simon game *(http://codepen.io/claire514/full/yaqyEb/)*

This is an emulation of the classic memory game, built using jQuery and pure CSS.

Tic Tac Toe game with AI *(http://codepen.io/claire514/full/EgLZVE/)*

This is a Tic Tac Toe game that allows user to either play with a real opponent or the computer. A simple "win or block" algorithm was designed and used to code the AI. Built using jQuery.

Full Stack Development

Stock watcher (*https://watch-your-stock.herokuapp.com/, source: https://github.com/qzhou1607/stock-watcher-fcc)*

This is a stock-monitoring web application, which allows you to search for stocks and display stock data in a highly interactive chart, built using Angular JS, Node/Express, and MongoDB.

- Built front end using Angular
- Implemented Highcharts to enable interactive data visualization
- Architected and built Node.js/Express back-end with MongoDB database for storing data
- Designed REST API for clients to perform CRUD actions on user and stock data
- Synchronized user activity in real-time using Socket.IO
- Integrated stock search and data retrieval using Quandl API

Out tonight *(https://out-tonight.herokuapp.com/, source: https://github.com/qzhou1607/out-tonight-app)*
This is a night-activity coordination application, which allows you to search for bars/night activities in an area and log in with your twitter accounts to RSVP.
• Built Node/Express server to fetch and parse local bar information from Yelp API
• Designed Mongoose schemas to create users and save user routes in MongoDB
• Implemented Twitter authentication using Passport.js

EDUCATION

Ph.D.	University of California, Davis	2011-2015	Biomedical Engineering
B.S.	Peking University, Beijing, China	2006-2011	Medicine

RESEARCH

Graduate Student Researcher ***Univeristy of California, Davis*** **07/2011-06/2015**
Projects: *Biosensor for Cell Analysis in Microfluidic Devices*
Department of Biomedical Engineering, Advisor: Alexander Revzin
Developed multiple devices with miniaturized cytokine aptasensors for diagnostic/scientific use, including an electrochemical biosensor to interrogate the intercellular communication between liver cells upon ethanol injury, a portable device for selective cell capture in HIV/AIDS diagnosis, and more. My research led to 12 publications (6 with first-authorship) and over 250 citations so far.

HONORS AND AWARDS

- "Earle C. Anthony Fellowship" *UC Davis, 2014*
- "Chinese Government Award for Outstanding Students" *China Scholarship Council (CSC), 2013*
- "Linking Sino-European Universities through Mobility Scholarship" *European Union, 2011*

PEER-REVIEWED PUBLICATIONS (SELECTED)

- **Zhou, Q.**; Son, K.; Liu, Y.; Revzin, A, "Biosensors for cell analysis" *Annual Review of Biomedical Engineering* 2015.
- **Zhou, Q.**; Rahimian, A.; Son, K. J.; Shin, D. S.; Patel, T.; Revzin, A., "Reconfigurable roof device with integrated biosensors to probe intercellular signaling in the ethanol-induced liver injury model" *Methods* 2015
- **Zhou, Q.**; Patel, D.; Kwa, T.; Haque, A.; Matharu, Z.; Revzin, A., "Liver injury-on-a-chip: microfluidic co-cultures with integrated biosensors for monitoring liver cell signaling during injury" *Lab on a Chip* 2015.
- **Zhou, Q.**; Kwa, T.; Gao, Y.; Liu, Y.; Rahimian, A.; Revzin, A., "On-chip regeneration of aptasensors for monitoring cell secretion*" Lab on a Chip* 2014, 14 (2), 276-9.
- **Zhou, Q.**; Kwa, T.; Liu, Y.; Revzin, A. "Cytokine biosensors: the future of infectious disease diagnosis?" *Expert Review of Anti-infectious Therapy* 2012, 10 (10).
- **Zhou, Q.**; Liu, Y.; Shin, D. S.; Silangcruz, J.; Tuleuova, N.; Revzin, A., "Aptamer-containing surfaces for selective capture of CD4 expressing cells." *Langmuir: the ACS journal of surfaces and colloids* 2012, 28 (34), 12544-12549.

COURSES (SELECTED)

- Data Structures and Algorithms
- Signal Acquisition and Analysis