

Rui (David) Zhang

Full Stack Developer | Ex-National Swimmer | Recreational Boxer

Work

University of Waterloo Research

Undergrad Research Assistant, Jan - Present 2018, Waterloo, ON

- Developing an application that provides anomaly detection visualization for embedded system security with Sr. Research Assoc. [Carlos Moreno](#)
- Working with real-time hacking simulations to develop a server and frontend that presents the results to Google, IBM, AMD, and others

Validus Research

Full Stack Web Developer, Sept - Dec 2017, Toronto, ON

- Refactored Validus' Underwriting Platform from AngularJS (JavaScript) to Angular 5 (TypeScript) resulting in a 35% reduction in code.
- Increased the Underwriting Platform performance by 20% through an architectural redesign and implemented routing, observables, services, and service-workers
- Reduced 99% of web service calls by applying localStorage caching and bypassing async constraints to the Underwriting Platform
- Integrated Tableau data analytics into the platform with multiple optional constraints to manipulate data
- Designed and deployed into production, an enterprise level RESTful API via MuleSoft and negated 75% of the original code
- Replaced 25 API endpoints with 20 and achieved identical results and linked it to the Underwriting platform
- Constructed a dynamic user-friendly announcement feature for underwriters and eliminated delays between business and IT by 90%

Sun Life Financial

Web Application Developer, Jan - April 2017, Waterloo, ON

- Received an award for Passion | Performance | Partnership | People by contributing to the development of Sun Life's login page
- Designed a Chatbot and an Amazon Alexa Skill that let's users perform insurance claims and received funding for further development by the executive board
- Developed proof of concepts (PoC) using Angular2 and ReactJS in an agile scrum process and approved by lead architect for development

Nightingale Electrical

Electrician, May - Aug 2016, Vancouver, BC

- Implemented electrical diagrams (AutoCAD) for installation guidance
- Shadowed electricians (Journeyman/Foremen) at various construction sites and optimized the process from assembly to installation
- Tenaciously learned the installation of wires, sensors, electrical panels, and other electronics without prior knowledge

About Me

I have a passion in **software development** and a strong **analytical** mind. I seek to invest in **challenging opportunities** and reward myself with the amount of popularity from my contribution. I have an on-going interest in the field of **AI and Blockchain**.

Contact Me

- r255zhan@edu.uwaterloo.ca
- My Website: dzcodex.github.io
- [Github](#)
- [LinkedIn](#)
- (519)-721-7737

Skills

- **Languages:** Python, Java, JavaScript, MySQL, HTML & CSS
- **Technology:** Angular5, MuleSoft, VueJS, NodeJS, Linux, Microsoft SQL, Git

Extra Courses

- Machine Learning - Stanford University Coursera
- Algorithms and Data Structure Specialization - UC San Diego Coursera
- Python Data Science - Udemy
- VueJS & Vuex - Udemy

Education

- University of Waterloo - B.A.S. Candidate
Management Engineering

Hackathons

- HackPrinceton 2017 (Featured)
- Hack Harvard 2016
- Hack The North 2016
- UofT Hacks

Projects

Stock Market Analysis

Statistical Approach for Stock Predictions and Daily Risks

- Developed a stock market analytical tool based on university level statistics and probability to calculate daily returns, moving average of stocks, correlation between stocks, value at risk, and stock predictions
- Self-taught and applied stock prediction methods including Bootstrap and Monte Carlo Method to run simulations for accurate predictions
- Technology: Python - Numpy, Pandas, Seaborn, Matplotlib

Grocertrack - Full Stack Web App

Helps food retail companies increase efficiency through data analysis

- Developed a full stack website that helps food retail companies increase efficiency through supplying a secure data storage and manipulation system
- Created an Enhanced ER diagram with dozens of entities and attributes, added data into a MySQL data base, applied queries with relevant business logic, and developed the frontend for a user-friendly visualization experience

HackPrinceton 2017 - Scheduler Pro

Amazon Alexa Skill - Voice Activation/Texting/Scheduling (Featured on Twitter Princeton)

- Developed an Amazon Alexa Skill with text messaging and scheduling capabilities in 36h
- Implemented an algorithm that prioritize daily tasks into an optimal schedule and integrated DynamoDB for further data collection used to remind users of deadlines
- Awarded as an Amazon Sponsor Prize Winner and featured on Princeton's Twitter Page

HackHarvard 2016 - PacMen

Multiplayer - SDK provides backend with 3-tier Architecture

- Built a cross-platform multiplayer Pac-Men (up to 1 million connections) SDK in 36h
- Self-taught and implemented PhaserJS, HTML5, NodeJS, SocketIO, Firebase

Personal Website

State of the Art Web Technology for performance rendering

- Developed from scratch a single page application using VueJS/Quasar that outlines all my software experience
- Implemented the use of Components, Data-Binding, Directives, Animations/Transitions, service workers, and Routing
- No matter what page a user go to on my site, the browser will not reload

Other Interests

- Browsing StackOverFlow
- Reading tech articles on Appy Geek
- Keeping updated on Cryptocurrency, Blockchain, and stocks
- Weight lifting
- LesMills Body COMBAT/PUMP/CXworks
- Recreational boxing
- Ex-competitive Swimming