# Arnold Zhou

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## Education

**University of Michigan**, Ann Arbor, MI  September 2014 – April 2018
*Life Sciences Informatics (Major) and Applied Statistics (Minor)*


**Shanghai Jiao Tong University**, Shanghai, China  May 2015 – August 2015

## Work Experience

**Software Engineer at <u>CME Group</u>**; Chicago, IL  July 2018 - Present
*Technology: Java, Splunk, Spring Framework, Apache Maven, Log4j, Git, Python*
- Independently created Splunk Dashboards that query and manipulate real-time production data using Regex, allowing for the analysis of more than 2.2 million contracts every day
- Collaborated with over a dozen application owners to resolve configuration failures for weekly production deployments
- Developed a method to verify and reject multiple duplicate trading orders in circular buffer within milliseconds
- Improved multithreaded quality checking of match-making engine with Spring, reducing quality assurance run-time by at least 30%
- Reduced functional look up time by refactoring trading engine logic using Visitor Pattern
- Coded a Python API that uses SSL certificate authentication to mock the production server used by entire 60-person team
- Utilized shell scripts to detect and handle application failures, emailing logs to application owners

**Software Engineer at <u>Epilepsy Care Labs, Inc</u>**; Los Angeles, CA (Remote Startup)  December 2017 – February 2019
*Technology: Swift, Git, HTML, CSS, Angular 4, NodeJS, MySQL, AWS EC2/S3, Bitbucket Pipelines, WatchOS, Python*
- Created a web-based seizure detection system using a decision tree algorithm in a multidisciplinary environment
- Built a WatchOS/iOS app to detect epileptic attacks using heart rate and wrist movement
- Created an API on a Raspberry PI for database access and alert processing with NodeJS and port forwarding
- Automated unit testing and production deployments by adding Bitbucket Pipelines to source control process

**Webmaster at <u>Spark Engineering Motorcycle Club</u>**; Ann Arbor, MI  December 2016 – March 2018
*Technology: Angular 4, Python, PHP7, Agile, Bitbucket Pipelines*
- Supervised pull requests for proper branch merges and code styling from junior developers
- Oversaw weekly deployments by monitoring website health based on pipeline response
- Administered tasks to junior developers based on monthly sprints
- Led creation of club website using Angular 5 for a more reactive and modern layout, delivering a superior web experience for major sponsors, such as Ford, Vector, and Vi-Grade
- Refactored back end using PHP to resolve security risks and to streamline data processing

**Software Engineering Intern at <u>QuickenLoans</u>**; Detroit, MI  May 2017 – August 2017
*Technology: .NET, C#, AngularJS, Angular 4, MVC, SQL Server, Agile*
- Improved workflow design of internal email analysis site, creating a more intuitive and scalable error reporting system
- Rectified SQL storage schemas of all on-call groups and applications to handle data at least 15% faster while also improving stability
- Coded interactive and animated splash pages for internal sites to promote holiday awareness around the company

## Project Experience

**Tool Selector**, Michigan Capstone Project | **http://arnoldzhou.photos/BIOINF527/**  2018
*Technology: HTML5, Angular 4*
- Utilized a decision tree algorithm to create a website to allow researchers best choose a RNA sequencing tool

**Photography Website**, Personal Project | **http://arnoldzhou.photos**  2017
*Technology: HTML5, Ajax, JavaScript, PHP, AWS, Python*
- Developed an algorithm to dynamically load and convert specified images drawn from a database for a cycled view enhancing aesthetic marketing for professional photographed images

## Skills and Interests

Technology: C++, C#, C, Java, .NET, WPF, Python, R, MATLAB, Angular 4, AngularJS, Bootstrap, SQL Server, Unity 3D Game Engine, Arduino, Entity framework, MVC/MVVM, Agile, Spring, Log4j, Splunk, Git, Mercurial, Linux
Languages: Spanish (Intermediate), Chinese (Intermediate)
Interests and Activities: Rock Climbing, Photography, Tennis, Skiing, Piano, Trumpet