

# MOYANG HE

iammoyang@ccs.neu.edu · 206 - 390 - 0024 · Seattle, WA, 98109

## EDUCATION

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M.S., Computer Science, Northeastern University(GPA 4.0), Seattle Sep 2015 – Jun 2017

B.S., Mathematics and Applied Mathematics(GPA 3.6), Xiamen University, China 2011 – 2015

## TECHNICAL SKILLS

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**Languages & Tools:** Java, Python, C/C++/STL, SQL, Scheme, L<sup>A</sup>T<sub>E</sub>X

**Knowledge:** OOP/OOD, Design Patten, Algorithm & Data Structure, Functional Programming  
Concurrency programming, Computer System, Machine Learning, Web Development.

## PROJECTS

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**Online Course Registration Web Application** Spring 2016

Skill & Tools: Bootstrap, jQuery, Angular.js, Node.js, MongoDB

- Developed a onp-page application with Angular.js in MVC architecture and used Bootstrap frameworks for responsive layout. Facebook API is also used for sharing with social media.
- Create asynchronous server with Node.js for back end and deployed MongoDB database in OpenShift cloud platform.

**Space Invaders Desktop Game In Java** 2015 - 2016

Skill & Tools: Design patten in Java, JUnit Test Framework, Swing GUI, pip, Git

- Designed and created a game in Java and developed with JUnit in Eclipse.
- Developed GUI with Swing framework and Java 2D graphics library.
- Refactored code with new functional programming features provided by Java 8, improved parallel performance by 40%.

**Python-based Study and Implementation of Quantitative Trading** 2014 - 2015

Skill & Tools: Functional programming, Concurrency programming Scipy/Numpy, Scikit-learn

- Built a multi-threaded Python crawler with urllib2 and scrapy library to craw stock news website, then parse HTML with BeautifulSoup and retrieve information.
- Implemented random forest algorithm to analyze stock market news using Python and R machine learning package, proposed a trading strategy for statistical arbitrage, and created a Django-based websites to posted real time trading simulation.

**Mathematical Contest Honor** 2013, 2014

- Led a team to participate two Mathematical Contests in Modeling.
- Designed and implemented a graph theory based algorithm to recover information from teared paper. First Price, 1.5% in 25558 teams
- Conducted and implemented a traffic flow simulation and statical analysis program to investigated how different traffic rule affect traffic efficiency. Meritorious Winner, 7% of 6755 global teams