

Yuwei Jiang

yuwei.jiang@rutgers.edu
+1(323) 301-3957

<https://www.linkedin.com/in/jiangyuwei>
<https://www.peterjiang.me>

EDUCATION & AWARDS

Rutgers University, the State University of New Jersey, New Brunswick, New Jersey, USA
Master of Science in Electrical and Computer Engineering, Concentration: Computer Engineering
Graduation: Jan 2018
GPA: 3.9

South China University of Technology (SCUT), Guangzhou, China
Bachelor of Science in Engineering, Concentration: Automation
Sep 2011 – July 2015

Award: Third-class Scholarship of SCUT (2013-2014)

Relevant Courses

Software Engineering I&II, Intro to AI, Parallel & Distributed Computing, Higher Computer Language (C++), Mobile App Engineering, Natural Language Processing, Computer Architecture, Communication Networks, Data Structure & Algorithms

EXPERIENCE

SIG: Susquehanna International Group, Philadelphia

Software Developer Feb 2018 – Present

- Investigated and fixed a production issue with a critical cross-platform file transfer software in C++ on which the whole firm heavily depends. Fixed bugs including network error handling and pointer manipulating
- Investigated a production issue on a data distribution component preventing dozens of gateways from starting; wrote customized C++ testing software to simulate production environment and reproduce the issue
- Developed multiple tools in Python and Bash scripts for QAs to ensure products consistency, for other developers in my team to do basic testing easier and gain more confidence before submitting products to QAs
- Maintained a staging environment and implemented multiple tools to catch bugs for both my team and other teams; validated data flow to downstream users online and successfully prevented potential production issues before products put into production
- Implementing Nasdaq Ouch to Trade Options binary protocol ultra-low latency C++ gateway including internal-external message translation, compliance check and kill switch protection, under compliance with Nasdaq and SEC regulations
- Developed sophisticated testing tools including both functional and performance testing for my team and infrastructure team to do health check before new machine put into production
- Improved new next generation internal message protocol on multiple components with the ability to send a wider range field

Software Developer Intern

Jun 2017 – Aug 2017

- Adapted one of the core order routing systems written in C++ to mapping the NYSE Symbol Index Number with NYSE Symbol due to the upgrading of New York Stock Exchange trading system with one colleague
- Profiled the performance of one of the core order routing systems written in C++ with perf, FlameGraph and Python; found a bottleneck and improved the performance by reducing the overall latency by 15%
- Implemented an automatic latency report system for an order routing and quoting gateway handling millions of orders per day, giving detailed latencies based on the requirement of upstream clients using Python, R and Shell scripts
- Parallelized the latency report system and reduced the analyzing time from 4 ~ 8 hours to 0.6 ~ 1.5 hours
- Developed a NYSE Pillar database validation system cross checking internal database with NYSE exchange database in Python

RESEARCH EXPERIENCE

Stock Price Trends Predicting System Based on NLP Sentiment Analysis, Rutgers University Jan 2017 – May 2017

- Preprocessed text contents with NLTK from Twitter and Stocktwits with Python: removing hyperlinks, citations, tickers, stop words and numbers; tokenizing the sentences to a list of words
- Extracted the features by *bag of words* and *word2vec*, trained SGD and ANN model for binary sentiment prediction
- Trained SVC, GaussianNB and SGD classifier for stock price trend prediction
- Achieved 0.73 accuracy for sentiment prediction based on the one-year data we used; achieved the best accuracy of 0.67 for stock close price trends prediction over one month

Online Stock Tracking and Predicting System, Rutgers University Jan 2016 – May 2016

- Led a team of five designing a dynamic website using PHP, JavaScript, Ajax, JQuery, CSS3 and Bootstrap
- Implemented Bayes, SVM, ANN based prediction algorithms and RSI, EMA prediction indicators
- Developed and maintained a database with MySQL and visualization system with Google Chart APIs

Digits and Faces Recognition, Rutgers University Jan 2016 – May 2016

- Implemented three algorithms: Perceptron, Naïve Bayes and Margin-Infused Relaxed Algorithm with another member in Python
- Designed “adjacent-based” extractor for faces recognition and implemented multi-zoning extractor for digits recognition, which increases the accuracy for 15% when data size is comparatively small

Parallel Merge Sort using MPI and OpenMP, Rutgers University Oct 2016 – Dec 2016

- Implemented parallel merge sort using MPI and OpenMP in C and optimized it for common star-network architecture clusters
- Improved the computation to communication ratio of parallel merge sort by 104.5% for Orbit-lab at Rutgers University

Personal Health Monitoring and Analyzing System, Rutgers University Sep 2016 – Dec 2016

Geo-Based Chat and Event Mobile Application, Rutgers University Oct 2016 – Dec 2016

SKILLS

Technical: C/C++, Android, PHP, Java, Python, JavaScript, Assembly Language, CSS, MySQL, ISPC, CUDA