Alexander Lee

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Education

University of Illinois at Urbana-Champaign August 2015 - May 2019

B.S. Computer Engineering; Dean's List; Eta Kappa Nu

Notable Coursework:

Distributed Systems, Communication Networks, Computer Organization & Design, Parallel Programming, Computer Systems Engineering, Artificial Intelligence

Experience

Software Engineer, Jump Trading July 2019

Working under Core Development.

Writing highly performant C++ code for Jump's high frequency algorithmic trading system.

Software Engineering Intern, Jump Trading June 2018 - August 2018

Worked under Core Development on the Trading Platform track.

Architected and implemented the market data pipeline for a cryptocurrency trading platform.

Software Engineering Intern, Leidos January 2018 - June 2018

Worked with members of the Advanced Solutions Group to simulate, on Unity, refugee movement under varying environmental conditions based on historical data using neural networks.

Software Engineering Intern, Capital One September 2017 - October 2017

Worked on developing a classification model to detect Botnet traffic on external facing websites.

Software Engineering Intern, CME Group May 2017 - August 2017

Worked under Trade Execution Systems on the Order Entry team.

Developed python module to automate AWS EC2 instance life-cycle.

Created frameworks to deploy and test critical internal applications.

Projects

Chord: A Scalable Peer-to-peer Lookup Protocol for Internet Applications Distributed Systems Project

Implemented the Chord lookup algorithm under 8-bit node and key identifiers with one client.

Handled real-time dynamic network modification for node joining and crashing.

Used Google Protocol Buffers to implement message passing between nodes over a TCP connection.

Using Machine Learning to Forecast Market Volatility Hackathon at CME Group, 3^{rd} place

Trained an artificial neural network with historical market data to predict volatility within the next hour.

Fluctuated per-order transaction fees based on predicted volatility to maximize revenue.

Built using the REST API, pandas, numpy, and scikit-learn.

Skills

Languages: C, C++, Java, x86, SystemVerilog, Python, SQL, HTML, CSS, Javascript, ROBOTC, LaTeX
Client: Bootstrap, React
Cloud: AWS, CloudClient
Debugging Tools: GDB, Valgrind, ASAN
Version Control: Subversion, Git
Automation: Ansible, vRa