Jason Zhang

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Education

Johns Hopkins University — Baltimore, MD
B.S./M.S. Computer Science: focus in Machine Learning and Computer Networks — *Expected May 2020*

Coursework

Optimization for Machine Learning, Machine Learning, Computer Vision, Computer Graphics, Computer Networks, Parallel Programming, Medical Image Analysis

Experience

Goldman Sachs - Asset Management Team — Jersey City, NJ
Software Engineering Intern — *Jun 2018 - Aug 2018*

Transaction Cost Calculator Tool:

- Developed a cost calculator and override tool that allowed ease of use for portfolio managers to view, approve, and override transaction costs for their funds (compliant with MiFID II regulations).
- Created using React and Java Spring framework.
- Implemented automatic approval work flow that sends an approval/reject task notification, as well as a form for traders to override transaction costs on submit from the app.
- Used the RxJava library to optimize API request load in order to achieve faster responses to requests.

Johns Hopkins University - Department of Computer Science — Baltimore, MD
Research Engineer — *Apr 2018 - Current*

Fault Detection In Large Scale Networks:

- Researching with Professor Xin Jin and other PhD candidates to find novel approaches for accurately detecting faulty components in large scale networks.
- Utilizing Deep Learning to model network link relation and predict possible down components.

Johns Hopkins Applied Physics Lab - Wireless Systems Group — Laurel, MD
Software Engineering Intern — *Jun 2017 - Aug 2017*

- **DARPA Spectrum Collaboration Challenge**:
  - Developed on the DARPA Colosseum competitor system, which is a one of a kind RF traffic emulator capable of simulating 65,000 channel interactions among 256 wireless devices.
  - Designed/developed Python program for admins to oversee radio node reservations and configure them.
  - Dockerized the website and radio nodes to reduce spatial usage and mitigate system downtime.
- **Fly-Away Broadcast System V3**:
  - Developed on a fly-away system capable of modifying and broadcasting audio on multiple frequencies.
  - Implemented logging and an admin interface for the Python Django web app to help capture possible malicious activity from any users of the system and view them with ease.
  - Deployed vulnerability checker daemon that checks for vulnerabilities in over 100,000 Python modules and over 400,000 node modules. Ensures secure packages chosen for the code base.

Projects

3D Cortical Region Segmentation: Developed Convolutional Neural Network that segmented cortical brain regions in 3D MRI scans with a high degree of accuracy.

Simple CDN: Created a small scale CDN to serve a video file to multiple proxies. Implemented proxy with bit rate adaption and DNS in C/C++. Modeled network connections using mininet.

ML Optimizers: Implemented Projected Gradient Descent for multiple kernels. Used Hinge and Log Loss.

Skills

Java, Python, C/C++, Mininet, JavaScript, React, NodeJS, Docker, AWS, MongoDB, MySQL, Java Spring Framework, SciPy, MatLab, SolidWorks, Linux, GitHub, Keras, PyTorch, OpenGL, OpenCV