JONATHAN XUE

Chicago | jonathanxue.com | github.com/Jonathan-Xue

EDUCATION

08/2018-05/2021	**Bachelor of Science, Computer Science** – University of Illinois at Urbana-Champaign
	Bachelor of Science, Psychology – University of Illinois at Urbana-Champaign
	• Dual Degree, GPA: 3.98
08/2021-05/2022	**Master of Computer Science** – University of Illinois at Urbana-Champaign
	• GPA: 3.92

EXPERIENCE

09/2022-Present — **Citadel Securities** – Software Engineer
- Low Latency – Equities & Futures

06/2021-08/2021 — **Citadel Securities** – Software Engineer Intern
- Developed multiple FIX simulators mirroring session and application level UAT behavior.
- Optimized native C++ functions with SIMD SSE2 processor instructions leading to a 4x speedup.
- Benchmarked end-to-end functionality of a particular system seeking further optimizations. Proposed updates to specific functions result in a 1.75x speedup.

06/2020-08/2020 — **AWS S3** – Software Engineer Intern
- Developed an analytics tool analyzing AWS Lifecycle metrics from data logs with the Elastic Stack. Sample use cases include identifying the driving growth behind a given workflow and generating the corresponding aggregate statistics.
- Deployed the tool to multiple AWS regions and extended support for additional data sources.

06/2019-08/2019 — **Capital One** – Software Engineer Intern
- Developed a web application to organize data labeling for machine learning solutions using React.js + Redux with a Python Flask server and PostgreSQL database. Datasets are uploaded, annotated, and exported in both raw (JSON) and parsed (CoNLL, CSV, TSV) formats for different training models.
- Designed and implemented a separate text annotation module optimized for performance and stability.

11/2018-05/2019 — **CME Group** – Robotic Process Automation Intern
- Architected digital worker to automate employee termination/resignation processes. Tasks include disabling the employee account from the Active Directory, terminating VPN/Remote-Desktop access, disabling access to remote web tools and business applications, and removing the account from email and distribution lists.
- Parsed emails to retrieve necessary employee identification information with C# .NET

SELECTED PROJECTS

CourseAssign — *https://jonathanxue.com/CourseAssign*
- Developed a web application that analyzes teaching assignment and grade distribution data of past Computer Science courses at UIUC and their faculty instructors to determine best-fit matches between courses and faculty.
- Calculated semantic similarity between a course's description and an instructor's research interests with spaCy by comparing multi-dimensional meaning representations of keywords.

RELEVANT COURSEWORK

Advanced Data Management	Algorithms & Models of Computation	Applied Parallel Programming
Art of Web Programming	Artificial Intelligence	Communication Networks
Computer System Organization	Computer Architecture	Data Structures
Database Systems	Distributed Systems	Internet of Things
Natural Language Processing	Neural Network Modeling	Programming Languages & Compilers
Security and Privacy for Home IoT	Smart Cities, Homes, Phones and Beyond	System Programming

SKILLS

Languages: C, C++, HTML/CSS, Java, JavaScript, Python, R
Database and Client/Server Technologies: Express, Flask, Mongo, Node.js, SQL