

Ziheng (Jack) Chen

zihengchen2000@gmail.com ◇ zihengjackchen.com ◇ linkedin.com/in/zihengjackchen ◇ github.com/zihengjackchen

Education

University of Illinois Urbana-Champaign (UIUC) Aug 2023 – May 2025
Master of Science in Computer Engineering GPA: 4.00/4.00

University of Illinois Urbana-Champaign (UIUC) Aug 2019 – May 2023
Bachelor of Science in Computer Engineering, Minor in Mathematics GPA: 3.99/4.00 (Highest Honor)

Relevant Coursework Data Structures, Algorithms, Computer Systems, Distributed Systems, Database Systems, Computer Networking, Web Development, Machine Learning, Deep Learning for Computer Vision

Experience

Software Engineer Intern (co-op), StoneX Group – Chicago, IL Jan 2023 – June 2023

- Designed and developed an evaluation pipeline with pandas to benchmark prototypical commodity price indices
- Analyzed the potential profitability of commodity indices generated from 200+ index configurations, surpassed target by 23.3% in 10-year total return and 8.8% in Sharpe Ratio with the top-performing tested index
- Expedited benchmarking processes by parallelizing the execution in Databricks, reducing waiting time by 3,000%
- Collaborated closely with marketing associates to validate index generation and refine evaluation requirements
- Developed a Python script for CI/CD in Azure DevOps to automate Databricks workflow migration across environments, testing intricate logic to handle edge cases effectively, and eliminating manual operations

Data Engineer Intern (co-op), StoneX Group – Chicago, IL Aug 2022 – Dec 2022

- Deployed a proxy microservice to integrate Okta authentication into an existing cloud-native app using Docker
- Optimized the data curation ETL pipeline for a data-serving application to cut waiting time by 20 times to 5 seconds
- Developed a real-time usage analysis dashboard in Splunk, featuring dynamic filters for associates and categories
- Implemented agile methodologies to ensure flexibility and adaptability throughout the entire project lifecycle

Data Engineer Intern (full-time), Ecolab – Saint Paul, MN May 2022 – Aug 2022

- Profiled global sales history table in Snowflake, identifying 201M invalid rows to enhance data integrity
- Automated SQL query generation through Python and APIs to streamline the evaluation of data quality and usability

Projects

Traffic Risk Assessment and Mitigation – Autonomous Vehicles, Machine Learning Aug 2023 – Dec 2023

- Proposed innovative traffic risk assessment method and utilized Python to identify risky vehicles
- Accelerated experiments by 200% using subprocess in Python to conduct 30,000+ simulated trials in parallel
- Trained Reinforcement Learning Agents in PyTorch utilizing the traffic risk to mitigate 72.7% of accidents

GymLog – Web Application, Frontend, Backend, Full-Stack Development Oct 2022 – Dec 2022

- Coded a responsive cross-platform workout logging web app with React and TypeScript, deployed on Heroku
- Supported user authentication via Firebase to facilitate tracking and deliver personalized recommendations
- Established a MongoDB database for seamless data synchronization, employing Mongoose for frontend integration

Leadership

ECE Graduate Student Advancement Committee Member, UIUC – Champaign, IL Aug 2023 – Present

- Organize events fostering graduate student networking and community engagement in ECE
- Lead communication efforts with the ECE Department as a liaison for prospective graduate student visit days
- Orchestrate polling forms utilizing mass emails to recruit student volunteers, optimizing event organization

Skills

Programming Languages Python, C++, C, GO, SQL, JavaScript, TypeScript, Bash, Assembly, CUDA
Frameworks and Tools Git, Linux, Docker, React, pandas, PyTorch, NumPy, Azure DevOps