Ziheng (Jack) Chen

☎ 312-823-6315 | ✉ zihengchen2000@gmail.com | 📍 Clarendon Hills, IL, United States

🪪 zihengjackchen.com | in 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 (Highest Honor)	GPA: 3.99/4.00

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

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, 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`