

John Zhu

Computer science graduate student interested in software engineering and machine learning

(919) 454-4697 | 505 Mountain Sunset Lane, Cary, NC, 27519

johnshizhu@gmail.com | linkedin.com/in/johnshizhu | github.com/johnshizhu | johnszhu.com

Skills and Certifications

Python | Javascript | Java | Pytorch | Tensorflow | React | Angular | Node.js | Numpy | Pandas | MySQL | MSSQL | MongoDB | AWS | Git | NPM | BASH | Power BI | Jira | Agile | English | Chinese

AWS Certified Developer - Associate (DVA-C01)

Feb 2023

AWS Certified Cloud Practitioner (CLF-C01)

Nov 2022

Education

| | | |
|--|-----------|-----------|
| North Carolina State University <i>MS Computer Science</i> | GPA: 4.00 | Grad 2025 |
| University of North Carolina at Chapel Hill <i>Bachelor of Science</i> | GPA: 3.51 | 2022 |

Experience

Arch Mortgage Insurance | Database Engineering Internship | Greensboro, NC Summer 2023

- Led design and development of an automated database documentation pipeline.
- Built automated daily refresh of metadata for 2000+ MS SQL server database instances.
- Deployed and tested project on SQL Server Agent multiple deployment environments.
- Used Power BI and SQL Server to build an auto-updating database inventory dashboard.
- Cooperated in a team of 8 DBEs in an Agile development cycle maintained on Jira.
- Wrote documentation of the design, implementation, and maintenance of workflow.

UNC Shiau Lab | Research Assistant | Chapel Hill, NC 2021 - 2023

- Studied immune activation and cell trafficking in the zebrafish model using CRISPR.
- Characterization of the transgene irg1KI:GFP in WT and immune activated conditions.

Projects

Daily Bounty 2023 - current

- Led development, design, and deployment of Daily Bounty user/merchant website.
- Daily Bounty is a food-waste reduction org, reselling near end-of-shelf life food.
- Cooperated in a team of 3 developers over 20 weeks, following Agile protocol.
- Led development of frontend web features in React for user and merchant sites.
- Led design and development of backend architecture for payment and database queries.
- Product deployed on AWS using multiple services for scaling, payment, etc.

Heterogeneous Graph Transformer 2023

- Implemented and optimized heterogeneous graph transformer architecture in Pytorch.
- Analyzed HGT characteristics through hyperparameter search and other model edits.
- Analyzed sparsity and quantization performance optimizations, and their model impacts.
- All models were trained on the Web-scale Microsoft Academic Graph dataset.
- Full code, analysis, write-up, and docs at https://github.com/johnshizhu/HGT_Project.

Fridge 2022

- Laboratory inventorying web application built with Node.js, HTML, CSS and SQL server.
- User authentication, featuring encryption/decryption of sensitive information using bcrypt.
- CRUD operations for object data (reagents, boxes, fridges) stored in MS SQL server.
- Object search functionality, querying reagent name/sequence with a paginated display output.

Portfolio | johnszhu.com 2023

- Personal portfolio built with Angular, hosted on AWS S3 and routed using the Route 53 DNS.