

Jinhyun Hwang

201-245-8780 | jinhyunh0808@gmail.com | jinhwang.vercel.app | linkedin.com/in/jinhyun-hwang | github.com/jinhyunh

Education

Northeastern University, Boston, MA

Dec. 2024

Bachelor of Science in Computer Engineering and Computer Science

GPA: 3.96

Honors: Summa Cum Laude, Honors Program Distinction, Dean's List

Relevant Courses: Software Engineering, Database Management Systems, Computer Systems, Web Development, Computer Organization, Object Oriented Design, Logic, Embedded Design, Algorithms & Data, Networks, Probability and Statistics

Technical Experience

AstraZeneca Alexion

Jan. 2024 – Aug. 2024

Data Engineer Co-op

Boston, MA

- Architected a Data Lakehouse using AWS S3, Glue, and Athena to ingest and manage gene-disease datasets for scalable data management and querying from biomedical and genomics databases
- Designed ETL/ELT processes that reduced data processing times by an average of 3 hours per week, enabling faster query responses for rare disease initiative teams
- Implemented dashboards using R Shiny and Dash, leveraging GraphQL and in-house data pipelines to serve 30 users weekly
- Engineered a knowledge graph using Neo4j to integrate data from Orphanet and BKB, enabling the identification of over 4000 relationships between genes, diseases, and drugs
- Achieved 73% accuracy classifying aHUS clinical trial data with neural networks, demonstrating the potential of advanced models in rare disease research

Liberty Mutual

Jan. 2023 – Aug. 2023

Data Scientist Co-op

Boston, MA

- Constructed Luigi data pipelines that automated model development for car insurance pricing, ensuring compliance with state regulations and reducing the need for individual models, cutting processing time by up to 8 hours per case
- Built custom data preprocessing transformers using NumPy and Pandas to standardize underwriting model deployment
- Introduced an estimator testing suite that increased test coverage by 60% for custom transformers, improving the reliability of model outputs in compliance with industry standards
- Developed a smoke test in MLflow to ensure accurate execution of the pipeline, achieving 100% consistency in data integrity

Matrixspace

Jan. 2022 – Aug. 2022

Software Engineer Co-op

Burlington, MA

- Programmed BASH scripts to upgrade a Jetson Nano to Ubuntu 20.04 and install needed dependencies to run flight software
- Designed and maintained CI/CD pipelines in Jenkins using Docker to automate logging, testing, deployment, and debugging processes, leading to a reduction of manual code reviews by approximately 25% and enhancing overall code quality
- Developed a logging system for the drone using ROS and C++, facilitating data collection and analysis for flight tests

Technical Projects

2FA Smart Lock

Jul. 2024 – Present

- Led project management efforts by coordinating weekly updates to the professor and ensuring timely milestone completion through effective team communication and Gantt chart tracking
- Engineered an end-to-end connection from the compute module to the cloud, enabling real-time image transmission for facial recognition processing using MQTT protocol, AWS IoT core, and AWS Rekognition
- Develop a Next.js-based admin interface that streamlines user registration for the smart lock system, improving the processing speed of new accounts by at least 25%

Collision Detection Algorithm

Jul. 2022 – Dec. 2022

- Implemented a multi-object collision detection system using C++, enabling real-time analysis of 20 concurrent moving objects without sacrificing performance
- Improved an existing IEEE-published algorithm to reduce overall latency by 40% without affecting simulation accuracy
- Presented an IEEE paper to peers, highlighting bottlenecks of the original algorithm and key performance enhancements
- Assembled a control setup incorporating multimedia elements such as a bell and graphical display onto the DE1-SoC board to enhance the simulation's interactivity

Technical Skills

Languages: Python, TypeScript, JavaScript, C++, Java, R, SQL, MySQL, Postgres, BASH, HTML, CSS

Developer Tools: AWS, Git, GitHub, Docker, Kubernetes, Jupyter, Jenkins, VSCode IDE, Linux, UNIX, GraphQL, LaTeX, Atlassian

Technologies/Frameworks: NodeJS, Next.js, React, Pandas, MongoDB, Vercel, Django, Express, React, Flask