Jinhyun Hwang

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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 – Present
Data Engineer Co-op   Boston, MA
- Built an Open Targets Data Lakehouse on AWS with S3, AWS Glue, and Athena for scalable data management and querying
- Designed a data lake and warehouse to ingest and manage gene-disease datasets from biomedical and genomic databases
- Developed ETL / ELT pipelines to populate data marts and flat files, tailored to specific user requirements
- Created dashboards using R Shiny / Dash, leveraging GraphQL and in-house data pipelines to deliver specialized insights
- Constructed a dynamic knowledge graph linking genes, diseases, and drugs from Orphanet and BKB data using Neo4j
- Leveraged Scikit-Learn neural network algorithms to classify clinical trial data on aHUS, enhancing data-driven insights

Liberty Mutual   Jan. 2023 – Aug. 2023
Data Scientist Co-op   Boston, MA
- Developed Luigi data pipelines to streamline model development for car insurance pricing compliance with state regulations
- Built custom data preprocessing transformers using NumPy and Pandas to standardize underwriting model deployment
- Created an estimator testing suite to expand test coverage for our transformers, extending Sklearn's pytest-specific decorator
- Developed a smoke test in MLflow to validate the Luigi pipeline's execution accuracy and data integrity

Matrixspace   Jan. 2022 – Aug. 2022
Software Engineer Co-op   Burlington, MA
- Programed BASH scripts to upgrade a Jetson Nano to Ubuntu 20.04 and install needed dependencies to run flight software
- Developed and maintained CI/CD pipelines in Jenkins, leveraging Docker containers and Dockerfiles for consistent builds
- Automated code testing, logging, and deployment workflows by integrating Dockerfiles and Jenkinsfiles into CI/CD pipeline
- Deployed containerized applications with Docker in a Kubernetes cluster, ensuring scalability for drone swarm sizes
- Implemented drone simulation software in C++ by integrating ROS and two other open-source projects with company code

Technical Projects

Youboxd Web Application   Jul. 2023 – Aug. 2023
- Designed a full-stack dynamic web app using React as the front-end framework and Express as the back-end framework
- Developed a Search and Results page with the capability to search YouTube Data API and display summarized results
- Built a Details page that retrieved video information from remote API and interaction info from NoSQL MongoDB database
- Utilized Node Express and Mongoose to create RESTful Web services, supporting various HTTP methods for data interaction

Collision Detection Algorithm   Jul. 2022 – Dec. 2022
- Implemented a collision detection algorithm for multiple objects using a single thread in C++
- Improved an existing IEEE-published algorithm to reduce overall latency by 40% without affecting simulation accuracy
- Presented an IEEE paper summarizing performance improvements to the originally published algorithm
- Enhanced the simulation's interactivity by integrating keypad, VGA screen, and bell into code for the DE1-SoC FPGA board
- Designed free flowing objects to replicate real-world elastic collisions through simulated impacts and trajectories

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: Django, Express, React, Flask, NodeJS, Pandas, MongoDB