Ira Hysi

hysi.i@northeastern.edu | GitHub | LinkedIn | https://irahysi.com/

EDUCATION

Northeastern University *Expected May 2025*
Bachelor of Science in Chemical Engineering and Computer Science – *GPA: 3.5/4.0*
Courses: Object-Oriented Design, Database Design, Introduction to Machine Learning, Software Engineering, Mobile App Development

TECHNICAL SKILLS

Languages: Python, Julia, Java, Javascript, Typescript, C/C++/C#, MatLab, SQL (MySQL, Postgres)
Tools: Git, Docker, AWS (S3, Lambda, Bedrock), Figma
Frameworks & Libraries: TailwindCSS, React, NextJS, React Native, Fiber
Machine Learning: Pandas, NumPy, Matplotlib, Sklearn, Keras, PyTorch

EXPERIENCE

Software Engineer *Sept 2024 – Present*
Generate Product Development
- Member of a team of 6 engineers designing a mobile app that will allow users to rate and review nearby venues
- Designed and implemented RESTful API endpoints utilizing CRUD operations for efficient integration between the UI and database

Data Science, Machine Learning, and Sequencing Co-op *July 2024 – Present*
XGenomes Corp
- Reduced computational resource needs by >60% through the translation of a Python-based gene sequencing algorithm to a Julia codebase
- Optimized statistical modeling functions in Julia for GPU compatibility to enhance parallel processing efficiency
- Integrated state-of-the-art MLOps platform for performance tracking, computational resource management, and improved visualization

Computer Vision Co-op *Jan – Sep 2023*
Roche/Genentech Inc
- **Research:** Using Self-Supervised Learning to gain biological insight on large amounts of unlabeled preclinical and clinical oncological image data
- Reduced data required for training by >80% via development and implementation of novel feature selection method in data pre-processing
- Strengthened robustness in SwAV data pre-processing by introducing 10+ image augmentations and normalizations
- Achieved ~90% accuracy on self-supervised classification of Lymph Nodes via unique classification models

PROJECTS

Nightlife – *Go, React, React Native, Supabase, Docker, Typescript, CSS, Postgres*
- Venue rating and suggestion mobile app that caters its recommendations to user preferences
- Personalized recommendation algorithm with access to community-wide reviews and a user's geographical location

Employ.ai – *Javascript, NodeJS, TailwindCSS, Firebase, OpenAI*
- Web application that leverages AI to generate job postings best suited to a user's previous work experience
- Integrates OpenAI text generation with the Adzuna API job listings for accurate and relevant user recommendations

Disease Prediction – *Python, Torch, NumPy, Pandas, Sklearn*
- Leverages Graph Convolution Networks to identify patient disease based on open-source symptomology records
- Vectorized symptom data and integrated DeepWalk node embedding algorithm for model training
- Collected machine learning metrics (accuracy, precision, recall, F1) to assess model performance