Jimin Ryu

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Education

Brown University Providence, RI

Major: Computer Science – Applied Mathematics Sc.B. *Expected Graduation: May 2026*

Technical Skills

Languages: Java, Python, C/C++, Kotlin, GraphQL, JavaScript, HTML/CSS, MySQL
Frameworks: React, Node.js, TensorFlow, PyTorch, Scikit-learn
Developer Tools: Git, Docker, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Postman
Relevant Coursework: Machine Learning, Software Engineering, Statistical Inference, Discrete Structures, Computer Systems, Linear Programming, Deterministic Models, Data Structures and Algorithms, Linear Algebra
Business Acumen: Agile, Project Management, UI/UX Design, Risk Management, Stakeholder Communication

Experience

Software Engineering Intern Apr. 2024 – Present

Wingspans (Techstars '24 Startup) | Gatsby, Algolia, Cosmic.js, Figma, GraphQL *Providence, RI*

- Developed an automated marketing system tracking 57,000 users' email and web interactions, to motivate career growth via targeted and personalized emails for verification, weekly updates, and CRM initiatives
- Designed and developed the career builder and planner pages, featuring a modular interface for portfolio development, boosting user engagement by 72%
- Engineered an experience translator leveraging Natural Language Processing (NLP) to match individuals to job opportunities based on textual analysis and relevance scoring

Deep Learning Researcher Nov. 2023 – Feb. 2024

University of Idaho | Docker, REST, Pytorch, NumPy, TensorFlow *Boise, ID*

- Developed a Convolutional Neural Network (CNN) model for weed detection within sugar beet crops using images collected by a custom-built Unmanned Aerial System (UAS), enhancing efficiency for agricultural practices
- Containerized the model with Docker and implemented a RESTful API using Flask, for testing and validating the model's performance on new image data
- Achieved 94% accuracy and a testing loss of 0.00035 across 50,000 high-resolution images (1920x1080)

Project Manager Sep. 2023 – Present

Full Stack at Brown | TypeScript, Java, Spark, MongoDB, Express *Providence, RI*

- Led development for website and server to host research for 50+ members and 300+ publications
- Engaged with Brown's Physics Department chair and professors through weekly discussions on project execution
- Implemented agile methodologies, leading sprint planning, standups, and retrospectives to drive team collaboration

Projects

SpotiFinder | *TypeScript, Java, Spark, Spotify API* Mar. 2024 – Jun. 2024

- Developed a music discovery application leveraging Spotify API and regression models for artist recommendation
- Implemented k-nearest neighbors (k-NN) recommendation algorithm, using feature extraction and similarity measurement to curate a blended result of two separate artists trained over 3,000 artists' discography data
- Built a tree-recursion search algorithm to optimize music discovery, enabling users to find similar artists based on popularity metrics for personalized song recommendations

Interactive Maps Data Visualization | *TypeScript, Java, Spark, JUnit, Jest, Playwright* Jan. 2024 – May 2024

- Integrated map (Mapbox) with GeoJSON data overlay, allowing users to interact/visualize historical redlining data
- Developed a web API server optimized with caching to allow users to query and view data in CSV/JSON formats
- Applied comprehensive testing using TypeScript/Java to ensure secure/reliable performance

Flight Controller Application | *Android Studio, Kotlin, Java, Jetpack Compose, C++* May 2023 – Aug. 2023

- Mobile development for intuitive Android interface for drone control using a hybrid Java and Kotlin stack
- Encoded byte data into MSP packets using Java and decoded using C++ to control drone's motors and telemetry
- Implemented scalable Model-View-ViewModel architecture to enhance app reliability and maintainability