Seong-Heon Jung

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EDUCATION

Brown University, *Sc.B. Applied Math - Computer Science*, 4.0/4.0 GPA   Providence, RI | **Expected Graduation May 2025**
Relevant Courses**:** Program Design with Data Structures and Algorithms, Intro to Computer Systems, Honors Linear Algebra, Honors Statistical Inference, Intermediate Calculus (Physics/Engineering)

Korean Minjok Leadership Academy, 4.98/5.00 (Unweighted)   Hoengseong, S. Korea | Class of 2021
AMC 10 Honor Roll (Top 2.5%), AIME Qualifier

TECHNICAL EXPERIENCE

PaSh (Parallel Shell)
Research Assistant (Python, Bash Script)   Providence, RI | November 2022 – Present
- Developing a system for the automatic parallelization of POSIX shell scripts hosted by the Linux foundation.
- Modified Scikit-Learn's Logistic Regression model to enable parallel execution ML scripts via PaSh.
- Developing benchmarking suite to test PaSh's efficacy on multiple ML workloads with Prof. Nikos Vasilakis.

OKIT Inc.
Machine Learning Intern (Python, JavaScript)   Seoul, S. Korea | June 2022 – August 2022
- Engineered ML model predicting locations a user visited with 83% accuracy using Scikit-Learn's AdaBoost Regressor.
- Built Keras collaborative filtering model recommending places to visit among 3.6M registered locations with MSE < 0.08.
- Programmed a modified TF-IDF algorithm for finding words of significance from user posts to analyze user characteristics and macroscopic trends within userbase.
- Deployed Flask API on Google Cloud VM for running ML predictions.
- Constructed admin server for moderating 1000+ users and 10k+ user content with Forest Admin.

Product Management Intern   Seoul, S. Korea | April 2021 – June 2021
- Produced 15 promotional images with Adobe Photoshop and XD to be used on the App Store and Play Store.
- Drafted application for Google Play's ChangGoo Program – selected among 80 companies and funded $100,000.
- Executed QA checks on 7 different versions of the app including but not limited to LopLat SDK functionality, log-in token security, iOS – Android UI consistency, SendBird API integration.
- Coordinated hotfixes with front-end & back-end developers via Confluence/Jira, Zeplin, Slack.

Brown RISD Game Developers
Programmer (C#, Unity)   Providence, RI | September 2021 – Present
- Collaborated with a team of 10+ people of Artists, Designers, and Programmers to build 3 games with 2 public playtests.
- Published 3 new games to itch.io, created DLC for 1 game.
- Expanded the weapon system to accommodate hitscan weapons.
- Implemented enemy AI to track, aim, and attack at player.
- Engineered 3D rigidbody motor mechanisms for realistically simulating Beyblade physics.
- Added save functionality to game via JSON logging.
- Assembled UI of the title screen, game screen, and results screen in Unity and implemented scene transitions.

PROJECTS

Board Game Engine
- Published a Ruby Library (RubyGem) for building boardgames to be played on the command window.
- Provides 5 objects and modules which offer methods to handle board interactions and user input.
- Received over 700 downloads on rubygems.org.

Multithreaded DBMS
- Created dictionary based in-memory Database management system in C.
- Implement fine-grained multithreaded tree operations via pthread.h to handle multiple client requests concurrently.
- Manage client activation and termination with coarse-grained concurrency.
- Enable connecting to DB remotely with socket.h networking.

SKILLS & INTERESTS

- Programming: Python, Pandas, PyTorch, TensorFlow, Unity, JavaScript, Ruby on Rails
- Agile: Jira, Confluence, Slack, GitHub Teams