Joseph Keelagher

Software Engineer

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Skills

Python
(Pandas, Matplotlib,
 Machine Learning,
Beautiful Soup,
SciKit-Learn)

C
(Advanced Data Structures,
 Algorithms)

Java
(Object-Oriented Software
and Design, UML diagrams)

MySQL Workbench
(SQL Queries, Entity-
Relationship Diagrams,
Database Design)

HTML/CSS
(Basic Web Design)

University Mathematics
(Linear Algebra, Calculus 2)

Education

**University of
Melbourne**
Final Year -
Bachelor of Science (B.S)
Computing and Software
Systems Major
2021 – 2024

**Parkdale Secondary
College**
Graduated 2021
ATAR – 94.30

Projects

Personal Website – HTML, CSS, JavaScript
Website | GitHub
- Implemented responsive design principles to ensure compatibility across various devices and screen sizes, providing a seamless user experience.
- Utilized JavaScript for interactivity, such as form validation and dynamic content loading, enhancing user engagement and interaction.

Brownlow Medal Predictor – Python, SciKitLearn, Pandas
GitHub
- Conducted data wrangling by excluding non-numeric features and employing zero imputation for missing data.
- Utilized Pearson Correlation for feature selection, setting a threshold of ±0.5, and employed k-folds cross validation to determine optimal feature count.
- Implemented multiple regression model for predicting Brownlow votes, guided by preliminary analysis identifying highly correlated features.

ShadowDance Rhythm Game – Java, BAGEL, Maven
GitHub
- Developed a modular, object-oriented ShadowDance rhythm game using Java and BAGEL, emphasizing abstraction and code reusability.
- Created multiple levels with diverse gameplay mechanics, challenges, and music tracks to engage players.
- Leveraged BAGEL framework features for efficient graphics rendering, input handling, and game loop management.

Concert Company Mock Database – MySQL Workbench
GitHub
- Employed MySQL Workbench's visualization tools to design entity-relationship diagrams (ERDs) and generate database schema.
- Designed and implemented a relational database based on a concert company's mock business requirements document considering business constraints.

Career history

Bar Gaming Attendant at Mordialloc Sporting Club
February 2022 – Present

Soccer Coach at Grasshopper Soccer
February 2015 – February 2023

References

Available upon request