

JOSEPH KEELAGHER

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EDUCATION

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| University of Melbourne (B.Sc) Bachelor of Science in Computing & Software Systems | <i>Class of 2024</i> |
| Parkdale Secondary College ATAR - 94.30 | <i>Class of 2021</i> |

TECHNICAL STRENGTHS

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|------------------------------|--|
| Programming Languages | C, Java, Python, HTML (Basic), CSS (Basic), JavaScript (Basic) |
| Software Design | Algorithms & Data Structures, Software Design Patterns |
| Databases | MySQL |

PROJECT WORK

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| Personal Website HTML, CSS, JavaScript | Website GitHub |
| <ul style="list-style-type: none">Implemented responsive design principles in CSS 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. | |
| IMDB Movie Rating Predictor Python (Sci-Kit Learn, Pandas, Matplotlib), Machine Learning | GitHub |
| <ul style="list-style-type: none">Implemented multiple machine learning models (Linear Regression, Gradient Boosting, Random Forests) to predict IMDB movie ratings, achieving 75% accuracy.Conducted data cleaning, feature engineering, and normalization to prepare the IMDB dataset for analysis.Applied cross-validation and hyperparameter tuning to enhance model performance and reduce overfitting. | |
| 'Tetress' AI Gameplay Agent Python, Artificial Intelligence | GitHub |
| <ul style="list-style-type: none">Developed and implemented a Minimax adversarial game-playing agent with alpha-beta pruning, enhancing search efficiency and decision-making speed.Designed robust state representation classes, improving problem formulation and facilitating the agent's strategic analysis. | |
| PC Rhythm Game Java (Maven, BAGEL, Gradle) | GitHub |
| <ul style="list-style-type: none">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. | |