

ARIADNE VENTURA

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Highly self-driven Software Engineer. Searching to leverage my skills within a team-based environment, where I can partake in the development of software solutions and grow my professional and technical skills accordingly.

EXPERIENCE

FEB 2023 – CURRENT

SOFTWARE ENGINEER, LEIDOS AUSTRALIA

- Collaborating with senior engineers, experienced developers and product management adhering to industry best practices regarding the software creation process. This includes practicing agile development with a Scrum framework, good coding standards, a two-step reviewer process, robust testing, and continuous integration.
- Deliver high-quality, efficient, and robust production code using both popular and upcoming tools to iteratively build web experiences using a microservice architecture for hundreds of users.
- Converted an important, relied upon section of the code base from Java to Rust for performance boosting.
- I acted as scrum master during December of 2023, a period in which my current scrum master was away on vacation. This included organizing and running stand-ups, refinements, retrospectives and reviews as well as communicating with our clients.

EDUCATION

HIGHSCHOOL, ACADEMY OF MARY IMMACULATE

- Subjects completed: methods, further, chemistry, biology, Italian and English
- Received 'Certificate of Excellence: Maths' 5 years in a row.

BACHELOR OF SOFTWARE ENGINEERING, RMIT

I completed my Bachelor of Software Engineering with Distinction, with a GPA of 3.5. Main creations:

- Programmed a banking website application with **C#** and **.NET 8.0** utilising MVC architecture and design patterns such as the factory method and dependency injection, to create a comfortable and fully developed web experience targeted towards banking users, allowing them to withdraw/deposit/transfer and schedule payments, as well as update their account details and an admin portal to update/lock user accounts.
High Distinction
- Implemented a path planning algorithm with **C++** to allow a robot to navigate between two points within a 2D environment (with obstacles). The focus was on pointers and dynamic memory management.
Distinction

- Programmed a text-based **C++** program of the board game Scrabble using ADTs, linked lists, pointers, exception handling and dynamic memory management. I focused on various ADTs, the randomisation of the tiles which would be distributed, invalid inputs, colour enhancements and multiplayer which supports 2-4 players.
High Distinction
- Created a full-stack web application using **React** with **Typescript** and **SQL**, for purchasing healthy groceries online. This included a fully operating checkout and payment system with credit-card validation. As well as an admin portal with graph statistics to check popularity of goods, and user interactions.
High Distinction
- Coded and implemented a tuned AI for Connect 4 using Monte Carlo Tree Search in **C#**.
High Distinction
- Implemented reinforcement learning algorithms, Sarsa and Q-Learning with an incorporated intrinsic reward in **C#**, to allow a 2D character to navigate the space, avoid traps and zombies and solve 7 map levels!
High Distinction
- Programmed a village generator in Minecraft with **MCPi** which would randomise the number of houses for a village and where those houses would spawn. I focused on the randomisation of the houses using **Python** to control the size of the houses, size of the rooms and furniture in those rooms. I also implemented the function which controlled the materials that would be used, depending on which biome the village was spawned.
High Distinction
- Programmed a Telemedicine app, in an **Agile** based environment which included **sprints** every fortnight for the duration of the semester. The app allows for the booking of appointments between doctors and patients, profiles of doctors/patients and instant messaging. I was responsible for the user microservice, which included the backend for patients and doctors, CRUD development and security to ensure the users are only able to access what they would be able to access in a real-life environment. The backend was **Java**, with 100% testing coverage using **JUnit5** and over 100-unit tests in total.
High Distinction

PERSONAL PROJECTS

[Personal portfolio website!](#)

LANGUAGES/SKILLS

- C++
- C#, .NET 8.0
- Java, Junit, Spring
- Rust
- Javascript/Typescript
- React
- SQL
- Git/Gitlab
- Linux/Unix OS
- Unity