

Jacob Artis

Computer science graduate

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Skills

Complex problem-solving



Logic



ASP.Net



Python



Java



Innovative and driven computer science graduate with a passion for breaking down and understanding new concepts. Equipped with a solid foundation in computer science principle, algorithms, and software engineering along with proficiency in programming languages such as Python, Java, and C#. Seeking to combine a strong skill set and a collaborative team to further development of advanced technologies.

Education

Bachelor of Science: Computer Science (Artificial Intelligence) - 2:1

2020-09 – 2023-05

Royal Holloway University of London – Egham, Surrey

- Collaborated with in a team of 3 to develop a fish monitoring system in 24 hours and achieve third place at Royal Hackaway V6.
- Researched games industry methods and developed a complex game in 7 months for my final year project achieving 77%.
- Created my own parser and rewriting rules to create a programming language for 3D CAD.
- Developed with several machine learning algorithms including Lasso and Ridge Regression and compared their performance on large data sets.
- Led a team of 6 through the design process for a VR shopping experience implementing user psychology and testing to create a high-quality interface.
- Participated in a team of 6 using Agile Scrums to develop a restaurant ordering app.
- Completed a game in 72 hours for the Ludum Dare 50 game jam event.

A-Levels

2018-09 – 2020-06

Woking College – Woking, Surrey

- A-levels in Math, Physics, And Computer Science.
- Received a certificate of distinction in the elite UK Bebras Challenge 2018.
- Awarded a commendation for helping to create a field trip management program that the college would use.

Work History

Seasonal Sales Assistant

2023-10 – 2023-12

The Entertainer – Staines-upon-Thames, Surrey

- Utilized time management skills to increase efficiency during busy service.
- Worked closely with customers to deliver exceptional customer service.
- Communicated clearly with colleagues to ensure tasks were completed properly and quickly.

General Assistant

2022-06 – 2023-03

Desborough Hotels – Shepperton, Surrey

- Listened to and addressed customer concerns while serving food and drinks.
- Assisted colleagues when they were overwhelmed by jobs.
- Reduced customer waiting times during busy service by prioritizing important jobs and working efficiently.

Customer Assistant

2018-11 – 2019-12

Wickes – Staines-upon-Thames, Surrey

- Delivered outstanding customer service actively engaging with all their needs.
- Adapted to the fast-paced environment by handling deliveries while serving customers.
- Partnered with colleagues to tackle challenging tasks and meet deadlines.
- Maintained a clean shop floor and warehouse to keep a high standard of health and safety.

Projects

During my time in computer science, I have contributed to a diverse set of projects which each show sections of my diverse skill set. Below is a short breakdown of several projects I have participated in.

Programming language for 3D CAD

Created a programming language with unique syntax which interacts with a JavaFX plugin to generate a 3D CAD environment. The language uses a set of structural operational semantic rules and an externals syntax to rewrite a given input into instruction for the Java plugin.

Multi-Agent system

Learned and applied knowledge about intelligent agents and multi-agent systems to create autonomous agents that solved a game called **VacuumWorld**. Each agent would communicate with each other and operate autonomously using their information from the environment. By the end of the project, I had one robot map the environment then communicate to each cleaner robot a place to clean, it would report back then that spot had been cleaned and would receive another location from the mapper until all squares were clean. Each robot could request other robots to move should they get in the way, stopping the simulation from getting stuck.

Machine Learning

Experimented with many common machine learning techniques using Jupiter Notebook and the scikit-learn library. During this project I experimented with different methods such as K nearest neighbors, Lasso, and Ridge Regression. Data preprocessing and parameter selection was used to gain more accurate results, using techniques such as cross-validation while minimizing data issues (such as data snooping).

GoFish

GoFish was my team's entry of Royal Hackaway V6 and won 3rd place and the most creative use of Twillio award. The project used a raspberry PI and servo to create an automatic fish feeder and monitoring system for pet owners. The system backend utilizes a flask server to communicate with a webcam (phone) record and send videos of the fish and a servo feed them. The frontend used a discord bot and twillio as two different ways of interacting with the back end.

Signly

Signly was an entry for Royal Hackaway V5, it was a web app to assist with learning sign language. You could give it a phrase and it would show you the signs using the official BSL database, it also included a small proof of concept test to check the user's knowledge. It used a Django web framework to host a website front end and a JavaScript and python backend.

Roguelike Game

Created a game for my final year project and conducted extensive research into the gaming industry. The game used the Godot engine with gdscrip.

Hobbies

Game Jams

I enjoy creating small games using the Godot engine and participate in game jams. Many of these games are hosted on my [itch.io page](#) (Jacobartis).

Tabletop Games

Participate in roleplaying games with friends, the open problem-solving and player cooperation table-top games encourage is lots of fun.

Photography

Creativity and thinking out the box are why photography is one of my favorite hobbies. Allowing deep experimentation and a good excuse to explore new places.