

# Salman Ashraf

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## Education

### The University of Manchester

Manchester, UK

BSc in Computer Science

Sept 2022 - June 2025

- Courses:** Python, Java, Data Science, Operating Systems, Software Engineering, Logic and Modelling, Introduction Artificial Intelligence, Algorithms and Data Structures, Distributed Systems, Machine Learning, Algorithms and Complexity, Computer Vision, Cyber Security.

## Experience

### Bright Network Internship

Remote

Information Technology

June 2022

- Designed and implemented a path-finding algorithm for Amazon's self-driving delivery vehicles using Pseudocode and Python.
- Exploited graph abstraction and the A\* search method to productively calculate the shortest possible route between nodes on a 2-D grid.

### Tesco Extra

Manchester, UK

Customer Service Assistant

Feb 2021 - Present

- Delivered exceptional customer service, dedicating over 1000 hours to assisting customers with a wide range of inquiries and requests.
- Maintained an average customer satisfaction rating of 85% and received a 'thank you' bonus worth 1.25% of annual wage in the year 2021.

## Projects

### Selfish - Space Edition

Manchester, UK

**Technical Skills:** Java, Serialization, Git.

March 2023

- Built the complete back-end logic of the game, including 10 space cards and 10 action cards, following the game's rules and mechanics.
- Implemented sorting and serialization tools to enable state storage/loading of the program and enabled real-time updates accordingly.

### Breakout/Brick Breaker

Manchester, UK

**Technical Skills:** Python, Tkinter, Git.

Nov 2022

- Developed a graphical user interface (GUI) with clear and intuitive navigation buttons to made easy for users to interact with the game.
- Added tools such as cheat codes and a boss key to provide additional control over the game to users with greater accessibility.

### Data Visualization

Manchester, UK

**Technical Skills:** Python, Matplotlib, Data Analysis, NumPy, Pandas.

Aug 2022

- Analysed 7 data sets to generate visualisations identifying weather patterns, temperature changes, and correlations between different data.
- Implemented a bubble chart to display earthquake activity across 100+ nations, with each bubble representing the magnitude and location.

### Maze Solving Algorithm

Manchester, UK

**Technical Skills:** Algorithm Analysis and Complexity.

Feb 2022

- Developed an algorithm that solves any 2-Dimensional or 3-Dimensional maze or labyrinth and finds the optimal path from start to finish.
- Tested the algorithm on a website by generating random mazes of up to 200 cells of different shapes to ensure the accuracy and efficiency.

## Leadership and Awards

### The University of Manchester

Manchester, UK

Peer Assisted Study Sessions Leader

Mar 2023 - Present

- Conducted and facilitated sessions for 60+ new students, designed to assist in adapting to university life and academic expectations.
- Collaborated with staff to deliver workshops on topics such as time management, study skills, and campus resources among 300 students

### Manchester College

Manchester, UK

Peer Mentoring for Mathematics and Physics

Feb 2021 - June 2022

- Mentored a diverse group of 20+ students through a challenging academic curriculum, offering guidance, and feedback to help improve.
- Monitored performance across 14 module sections, addressing common mistakes and providing support and motivation to address errors.

**Jeremy Woolridge Scholarship** Awarded to top 20 out of 300+ students based on academic merit and widening participation criteria.

## Skills

**Technical** Python (Tkinter, Pygame, Pandas, NumPy), Java (Swing, FX), PHP, HTML/CSS, JavaScript, Linux, ~~TeX~~, Git.  
**Languages** Fluent in English, Italian, Urdu, Hindi, and Punjabi.