

# Sophia Jennifer Rose

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## Career

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### Graduate Java Developer

Jan 2022 – Sep 2023

*Ecebs (previously known as Visa Digital Ticketing)*

- Worked in teams demonstrating **Agile** methodologies, such as daily stand-ups, monthly sprints, code reviews, issue tracking & Kanban boards via Jira, and more.
- Primarily developed for a product composed of **SpringBoot microservices** communicating via **REST APIs** and **Kafka events**, utilising an **SQL** database, and running via **Docker & Kubernetes**.
- For these microservices, designed and implemented **system** and **integration tests** to ensure correctness and robustness of the code, and made improvements to tools used in this testing.
- Helped maintain the codebases of numerous projects by analyzing and correcting potential **security vulnerabilities** flagged by **Checkmarx**.
- Regularly performed **Level 3 Support** work, making changes requested by the company's clients and resolving technical issues.

## Education

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### University of Glasgow

Sep 2015 – Jun 2020

*Computing Science MSci*

with Honours of the First Class

- Research Project – *Inference of Typestate Specifications in Object-Oriented Programming*
  - Wrote a research paper on my contribution to the development of Mungo, a programming language implementing typestate and typestate inference, an extension to typechecking systems.
- Individual Project – *Encoding Session Types Into Linear Types In  $\pi$ -Calculus*
  - Used **Python** web app framework **Flask** and language recognition tool **ANTLR** to develop a **web app** demonstrating different formal models of computation across concurrent systems.
- Team Project – *St Andrew's First Aid e-Learning Web Application*
  - Co-developed a **Django** web app, focusing on **back-end** functionality, and acted as the team's Architecture Engineer, maintaining the systems the team used in the development of the project.

## Skills and Languages

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- **Languages/Libraries** – Java, TypeScript, JSON, SQL, Tailwind, Python, Ruby, React, and more
- **Technologies** – Linux, Git, Godot Engine, Bevy, Android Studio, Unity, ANTLR, Flask, Django
- Familiarity with many professional standards and practices for software development, such as Agile methodologies, issue tracking, version control, continuous integration, etc.

## Personal Projects and Extracurriculars

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- Game Jams: Participated in Duck Sauce Games Duck Jam 2024, 2023 & 2022; Global Game Jam 2020; and GUDEV's (Glasgow University Game Development Society) Game Jam 5.
- Participated in Advent of Code 2024, achieving 50/50 stars, and 2023, achieving 44/50 stars.
- Developed an Android app, MineShip, a game which combines elements of Minesweeper and Battleship. Later ported MineShip to React, playable from my GitHub.
- Member of the GUTS (Glasgow University Tech Society) committee in the academic year 2019-2020, including being the primary organiser of Board Games Night social events.