

# Jipa Claudiu

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## EDUCATION

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### University of Essex

Dec 2023

*Master of Science in Computer Science*

### University of Essex

July 2022

*Bachelor of Science in Computer Science*

## EXPERIENCE

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### Software Developer Intern

Jan 2023 – May 2023

*University of Essex*

*Colchester, Essex*

- Developed the front-end for a puzzle game using JavaScript, HTML, and CSS
- Designed and implemented a dynamic display for the UI elements of the page and of the puzzle board
- Integrated a fetcher and checker which retrieved new games from the supervisor's puzzle generator

## PROJECTS

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### Personal Website | *JavaScript, CSS, GitHub Pages, HTML, Git*

jipelski.github.io

- Developed a static website using HTML, CSS and JavaScript and hosted it using GitHub Pages
- Used GitHub API to dynamically load repositories from my personal GitHub into my website
- The static HTML files are created and loaded dynamically using JavaScript
- Used EmailJS to implement message sending behaviour

### Data Streaming using FastAPI | *Python, FastAPI, Docker, React, Git*

GitHub Repository

- Developed a full-stack application with a React frontend, FastAPI backend, and PostgreSQL database for real-time sensor data streaming and storage
- Implemented RESTful and WebSocket API endpoints for data retrieval and ingestion
- Developed a data mocking module in Python to simulate sensor data, and test the functionality of the backend

### TurtleBot3 Autonomous Navigation | *Python, ROS2, Gazebo, Turtlebot3, Git*

GitHub Repository

- Developed a PID controller in Python to ensure obstacle avoidance and right edge wall following behaviours for a TurtleBot3 running on the ROS2 operating system
- Developed the same behaviours using fuzzy logic without the use of 3rd party libraries
- Tested both implementations in the Gazebo simulator and in the robotics arena of the university, achieving results that exceeded the objectives

### Multiplayer Ball Game | *Java, Socket Programming, JUnit5, Multithreading, Git*

GitHub Repository

- Developed a game hosting server with a tested capacity of 50 clients using java.net.Socket
- Developed a client side program which connects to the existing server using the same library
- Developed listeners for both client and server side programs to properly interpret the changes in the game

### Map Reader | *Python, OpenCV*

GitHub Repository

- Developed a Python-based computer vision application using Python and OpenCV to accurately detect the orientation and position of a red pointer on a map.
- Implemented image segmentation and contour detection techniques to extract and analyze specific objects within images.

## SKILLS

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**Languages:** Java, Kotlin, Python, C++, C#, JavaScript, HTML, CSS, SQL (PostgreSQL, MySQL, SQLite)

**Frameworks:** .NET, Spring, JUnit, ROS2, React, Mockito, FastAPI

**Software:** Git, OpenVPN, Docker

**Libraries:** PyTorch, pandas, TensorFlow, OpenCV, scikit-learn, NumPy