

# Bim Rai

Birahoma@outlook.com | United Kingdom | [github.com/bimrai](https://github.com/bimrai) | [linkedin.com/in/bimitrai](https://linkedin.com/in/bimitrai)

## PROFILE

---

Motivated Computer Science student at Cardiff University (BSc with a Year in Industry) seeking a software engineering placement/internship. Strong foundation across Python, JavaScript, and exposure to C++, with hands-on experience delivering academic and self-directed projects end-to-end. Particular interest in financial technology and systems programming, demonstrated through multiple trading-focused builds. Comfortable working independently and as part of a team, with exposure to software engineering practices, full-stack development, and agile methodologies.

## EDUCATION

---

### **BSc Computer Science (With a Year in Industry)** *Present*

**Cardiff University**, Cardiff, UK

#### **2nd Year Modules** (current):

- Software Engineering, Full-Stack Development, Algorithms and Data Structures
- Challenge Based Group Project, Scientific Computing and Statistical Methods for Data Analysis

#### **1st Year Highlights:**

- Programming, Algorithms and Data Structures I, Object-Oriented Programming
- Discrete Mathematics, Computational Mathematics

## PROJECTS

---

### **Stock Trading Simulator** 2026

*Python, OOP, CLI* - [View on GitHub](#)

- Built a command-line trading simulator with real-time portfolio tracking, transaction history, and profit/loss reporting
- Architected with modular OOP principles, separate classes for assets, portfolios, and trade execution, enabling clean extensibility
- Integrated yfinance API in place of initial hardcoded data with live market prices, dynamically serving real time stock data across all trades

### **Trading Platform** 2025

*C++, OOP, Systems Programming* - [View on GitHub](#)

- Developed an object-oriented trading platform in C++, applying clean class hierarchies, encapsulation, and polymorphism
- Worked with low-level concepts including manual memory management and assembly-level integration
- Gained practical experience in performance-critical software design and compiled language constraints

### **Side-Scroller Game** 2024

*JavaScript, p5.js, HTML* - [View on Github](#)

- Designed and built a fully playable side-scroller from scratch, owning the full development lifecycle
- Implemented a custom physics engine, collision detection system, and frame-based sprite animation
- Delivered as a graded final project, demonstrating ability to scope, build, and ship software independently

## TECHNICAL SKILLS

---

**Languages:** Python, JavaScript, C++, HTML, CSS

**Libraries & Tools:** p5.js, Git, GitHub, VS Code

**Concepts:** OOP Design Patterns, Data Structures & Algorithms, Software Engineering Practices, Programming Practices

## **INTERESTS**

---

Financial technology, Software architecture, Systems programming, Web development