Pritam Gurung

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PROFESSIONAL SUMMARY

Curious and driven Computer Science undergraduate (predicted First Class) seeking an industry opportunity to nurture professional and personal growth. I am eager to learn from industry experts, deepen my technical skills, and develop as both a programmer and a well-rounded team member.

EDUCATION

University of Nottingham *BSc (Hons) Computer Science, Expected 2027*

- **Predicted Grade:** First Class
- **Relevant Modules:** Databases & Interfaces (87%), Computer Architecture (86%), Assembly Language Programming (76%), Programming & Algorithms (70%), Networks (69%), Introduction To Software Engineering (69%)

KEY PROJECTS

Pac-Man Web Game — *HTML5, CSS, JavaScript* *GitHub*

- Engineered a full browser-based recreation of the classic arcade game using **HTML5 Canvas** and modular ES6 classes.
- Built a robust **game loop** running at 30 FPS with real-time collision detection and responsive keyboard controls (Arrow keys / WASD).
- Implemented **Dijkstra-style pathfinding** for adaptive ghost AI, dynamically recalculating shortest paths as the player moves.
- Designed a clean, scalable codebase with separate classes for Pac-Man, Ghosts, and map logic, supported by a detailed project report of 4000 words and presentation on github.

Java Reversi Game — *Java, Swing/AWT* *Private repo*

- Designed and implemented a two-player **Reversi/Othello** game using the **Model–View–Controller** pattern for clear separation of concerns.
- Created an intuitive **Swing GUI** featuring dual player views, animated board updates, and move validation.
- Developed a **greedy AI opponent** that evaluates all legal moves and chooses the highest capture count.
- Incorporated comprehensive input validation, restart/undo controls, and detailed inline documentation for maintainability.

Hospital Record Encryption — *C* *GitHub*

- Built paired applications to securely **encrypt and decrypt** patient records with nurse/consultant authentication.
- Implemented **Caesar-cipher** encryption, robust input validation, and modular functions for easy future upgrades to stronger cryptography.
- Created clear command-line interfaces with structured prompts and error handling for reliable daily use.
- Documented full design, testing, and evaluation in a formal project report.

Vehicle & Owner Database Web App - HTML, CSS, Vanilla JavaScript, Supasbase (PostgreSQL) *Private repo*

- Designed and built a responsive, **accessible front-end without frameworks**, meeting **100% Lighthouse accessibility** on every page.
- Integrated a Supabase **REST API backend for secure querying** and updates of People and Vehicle tables.
- Implemented full workflow: **people/vehicle search with partial & case-insensitive matching**, add-vehicle process with automatic owner lookup/creation, and **robust input validation.**
- **Authored end-to-end Playwright test** to cover all features and exception cases, ensuring reliability and maintainability.
- Awarded 93% - among the highest in the module.

Additional Projects — details on **GitHub** or on **request**

- **Restaurant Billing System (C++17):** Three-module console suite for menu management, customer billing, and end-of-day sales statistics with persistent file I/O.
- **Student Marks Management (C):** Interactive marks database supporting up to 35 students and 10 tests, with a **PIN-protected supervisor mode** and data validation.
- **Wine Quality Prediction - Python, pandas, scikit-learn, Jupyter :** Developed and evaluated Linear Regression and Random Forest models on the Red Wine dataset, with full data, performing full data cleaning, feature scaling, and comparing performance with MAE, MSE, and R^2 metrics.
- **Run-Length Encoder/Decoder (Haskell):** Pure functional compression/decompression using higher- order functions, list comprehensions, and function composition.

TECHNICAL SKILLS & CERTIFICATIONS

Languages: Python, C, C++, Java, Haskell, HTML5, CSS, JavaScript, SQL, Assembly Language, Git, GitHub, VS Code, Linux
Concepts: Algorithms & Data Structures, Object-Oriented Programming (Java, C++), Functional Programming (Haskell), Front-End Web Development, Responsive & Accessible Web UI Design, Relational Database Design & Query Optimisation, Test Automation & Continuous Integration (Playwright, Git)

Certifications (expected):

- AWS Certified Cloud Practitioner — *December 2025*
- Harvard CS50x: Introduction to Computer Science — *November 2025*
- *IBM Java Developer Professional Certificate - January 2026*

EXTRACURRICULAR

School of Computer Science | Student Mentor | *University Of Nottingham* July 2024 - Present

- Mentored a group of 16 first year students, providing academic and personal support.
- Part of Nottingham Advantage award, completing extracurricular modules to build employability skills and gain formal recognition.

School of Computer Science | HackNotts | *University Of Nottingham* Scheduled Oct 2025

- Registered participant in a 24-hour overnight hackathon to collaborate on an original project, attend workshops, and pitch to judges.