Shehij Raina

Computer Science Graduate · University of Bath

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SKILLS

Languages: Python, Java, Kotlin, C, C++, JavaScript, Haskell, Bash, HTML/CSS

Frameworks & Libraries: NumPy, Pandas, Matplotlib, PyTorch, HuggingFace Transformers, scikit-learn, Django, Flask, Bootstrap, CMake, RmlUi, Android SDK, ROS

Databases: MySQL, SQLite, Firebase

Version Control: Git, Subversion (SVN)

Development Environments: Visual Studio Code, Android Studio, Xcode, PyCharm, Jupyter Notebook

Tools & Platforms: AWS (EC2, S3, RDS), Atlassian (JIRA, Confluence)

Operating Systems & CLI: macOS, Linux, Unix Shell, Terminal, Embedded Systems (Arduino)

EXPERIENCE

Feral Interactive, London, UK — *Game Developer*
JULY 2023 – PRESENT

- Ported two major AAA Windows game titles—including [Total War: EMPIRE](#)—to Android/iOS using C++, ensuring performance and visual parity with the original PC versions
- Implemented mobile-optimized UI/UX and control schemes tailored for touchscreen input, improving playability on mobile devices, using the RmlUi library
- Diagnosed and resolved critical bugs, crashes, and performance bottlenecks using tools such as AddressSanitizer (ASAN)
- Integrated new gameplay features, platform-specific enhancements, and DLC content into existing codebases, adhering to tight release deadlines
- Collaborated with cross-functional teams (QA, UI/UX, Graphics devs) to deliver stable builds across multiple mobile devices
- Led a team of developers during key weeks in the project lifecycle — managing daily stand-ups, task assignments, and reporting, in the project lead's absence
- Delivered a company-wide Dev Talk on integrating and utilizing the RmlUi library, improving onboarding and standardization for future projects

TBReAI – University of Bath, Bath, UK — *Developer*
OCTOBER 2024 – MAY 2025

- Contributed to the development of the SLAM, Control and LiDAR systems in the autonomous vehicle created by Team Bath Racing Electric, for competing in the Formula Student FS-AI competition
- Introduced a quadtree-based spatial indexing system in C++ to optimize storage and retrieval of sensed obstacle data, improving efficiency in real-time path planning and environment representation
- Worked with the Robot Operating System (ROS) framework using both Python and C++ to integrate perception, localization, and control modules

Global Minds, Telford, UK — *Summer Intern*
JUNE 2022 – AUGUST 2022

- Gained hands-on experience with AWS services including S3, EC2, and RDS
- Developed foundational skills in managing cloud infrastructure using the AWS Management Console, AWS CLI, and Cloud Development Kit (CDK)

LEADERSHIP & VOLUNTEERING

PAL (Peer-Assisted Learning) Leader
OCTOBER 2024 – MAY 2025

- Led structured peer-assisted learning sessions to support students in developing their language skills

Student Ambassador
MARCH 2023 – JUNE 2023

- Represented the Department of Computer Science to prospective students and families, providing insights into academic life and answering questions during campus visits and events

Academic Representative – Department of Computer Science
OCTOBER 2022 – MAY 2023

- Acted as a liaison between students and department faculty, gathering feedback and presenting student concerns in staff-student committee meetings to influence academic decision-making

Faculty Representative – Faculty of Science
OCTOBER 2022 – MAY 2023

- Represented Faculty of Science students by raising academic and welfare concerns to university staff and the SU Education Officer

Treasurer – Women in Science Society
OCTOBER 2022 – MAY 2023

- Managed society finances, oversaw budgeting and funding exercises to support events promoting women in STEM

EDUCATION

University of Bath, Bath, UK – *BSc (Hons) Computer Science*
OCTOBER 2021 – JULY 2025

- Graduated with **First Class Honours** (71.74%)
- Covered a broad curriculum including data structures and algorithms, artificial intelligence/machine learning, cryptography, human-computer interaction, computer graphics and vision, and practical experience with the software development lifecycle – requirements, design, development, and testing – through individual and group projects using Agile methodologies
- *Key Modules*: Machine Learning (85%) · Natural Language Processing (85%) · Data Structures and Algorithms (84%) · Foundations of Computation (82%) · Theory of Human-Computer Interaction (83%) · Advanced Algorithms & Complexity (68%) · Cryptography (70%) · Reinforcement Learning (65%)

PROJECTS

From Prompt to Panel: Enhancing Character Consistency in AI-Generated Comics via Textual Inversion
Python · PyTorch · Stable Diffusion · Textual Inversion · LoRA · CLIP

Dissertation project – A text-to-image pipeline that generates coherent multi-panel comic strips with consistent visual character representation across panels from a single prompt. In human evaluation study, the model achieved a mean rating of 8.57/10 (vs. 4.67/10 for baseline Stable Diffusion) on visual and narrative coherence.. [GitHub](#)

CharitableConnect
Java · Android SDK · Django

Android app for university students to discover nearby charity events and volunteering opportunities. [GitHub](#)

BinJA
Godot · GDScript

Arcade-style mobile game that teaches recycling – where players must sort waste into correct bins to score. [GitHub](#)

AWARDS & ACHIEVEMENTS

- **WiTathon 2025 – [Winner](#)** *"Health & Wellbeing"* track – awarded by Aico
- **WESBath Designathon 2025 – [Winner](#)** *"New perspective – Bringing equal access to an overlooked demographic"* track – awarded by BAE Systems
- **WiTathon 2023 – [Winner](#)** *"Accessibility"* track – awarded by iO Associates (UK/EU)
- **Rep of the Month** – May 2023, University of Bath Students' Union
- **Chancellor's Scholarship** – University of Bath, UK – 2021