

Jimin Ryu

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EDUCATION

University of Bristol, BSc Computer Science

Sep 2022 – Jun 2025

Predicted: First Class Honours

EXPERIENCE

Research Assistant

Jul 2024 – Sep 2024

Hanyang University

- Collaborated on research and development projects focused on reducing cybersickness and enhancing VR experiences.
- Developed a VR 3D first-person shooter game in Unity, utilising Meta Quest 3 and Omni Treadmill, as part of research on reducing cybersickness through vibrotactile feedback.
- Participated in experiment design, data collection, and statistical analysis to derive insights supporting the research hypothesis.

Co-creator

Oct 2023 – Mar 2024

Royal Academy of Engineering

- Facilitated specialised workshops to support intersectionally disadvantaged students, collaborating with peers to tailor content to address specific challenges.
- Led mentor sessions emphasising the cultivation of a liberatory university environment, illustrating concepts such as intersectionality and microaggressions to enhance understanding of the challenges faced by students from diverse backgrounds.

UX Research Assistant

Jul 2023 – Sep 2023

Global Research

- Conducted rigorous software testing to ensure seamless operation per user specifications and analysed platform UI/UX designs for an exceptional user experience.
- Conducted user research through usability testing, A/B testing, interviews, observations, and surveys, while identifying market trends via in-depth interviews (IDIs) with industry experts.
- Organised and transformed data into informative visualisations, facilitating data-driven decision-making.
- Conducted comprehensive research on AI applications, assessing their impact on usability optimization and forecasting future trends.

Database Assistant

Jan 2022 – Sep 2022

Testing Certification Institute

- Updated and maintained company databases, ensuring data accuracy and reliability while promptly addressing and resolving issues.
- Efficiently organised diverse datasets using advanced Excel functions, enhancing data analysis and processing through filtering and sorting techniques.
- Collaborated with team members to tailor Excel functions to meet specific data requirements.

Project Assistant

May 2020 – Aug 2020

Railroad Research Institute

- Proactively engaged with external stakeholders to identify and address project-related challenges, ensuring continuous adaptation of project requirements for successful outcomes.
- Conducted comprehensive literature reviews to curate the latest relevant research papers.
- Elevated the quality of research papers through meticulous review and proofreading.
- Applied linguistic expertise to facilitate document translation, enabling seamless cross-language communication.

PROJECTS

Computer Graphics | *C++*

Sep 2024 – Nov 2024

- Developed a 3D rendering engine capable of projecting 3D geometry onto a 2D canvas, utilising barycentric coordinate interpolation for precise, perspective-correct texture mapping.
- Implemented a Cornell Box simulation with depth buffering and realistic surface mapping to evaluate the accuracy of geometry projection and rendering techniques.
- Integrated dynamic lighting effects into the rendering pipeline, enhancing scene realism with detailed shadows, reflections, and material interactions.

Haunted Escape | *C#, Unity*

Nov 2024

- **Winner, GameJam 2024 (Best Visuals)** - Awarded for outstanding visual design and creativity.
- Collaboratively contributed to game design, programming, and gameplay mechanics to deliver an immersive player experience.
- Developed 15 suspenseful, progressively challenging stages within a haunted setting, engaging players as they navigated dynamic traps and ghostly encounters in an escape-themed game.

Edutopia | *C#, Unity*

Oct 2023 – May 2024

- Developed a map-based city-building combat game aimed at enhancing engagement and promoting student involvement in IBM SkillsBuild.
- Designed gameplay mechanics allowing users to expand their villages by solving IBM SkillsBuild problems and engaging in AI combat.
- Implemented tactical features to facilitate strategic decision-making and efficient village growth within the game environment.

Therago - AI Assisted Mental Wellbeing WebApp | *Python, HTML, CSS, JavaScript*

Mar 2024

- Led the overhaul of the Mood Tracker project, implementing a range of enhancements to improve user experience and functionality.
- Utilised a chat interface and friendly embedded messaging to enable users to effortlessly record voice messages or input text, creating an experience reminiscent of conversing with a friend.
- Implemented a voice-to-text feature for conversation analysis and key information extraction.
- Leveraged Cohere AI to integrate text classification and sentiment analysis, enhancing personalised user support.

Mood Tracker | *HTML, CSS*

Feb 2024

- Developed an emotion-tracking platform that integrates user-inputted feelings and events with calendar functionality, along with tools and features for stress management.

Game of Life | *Golang, AWS*

Nov 2023

- Collaborated in pair programming to implement Conway's Game of Life, prioritising efficiency and scalability.
- Developed parallel and distributed implementations utilising remote-procedure-calls (RPC) to link multiple AWS nodes.

Contaminated World | *C#, Unity*

Oct 2023

- Contributed to a team programming project to design and develop a platform game set in a mystery-contaminated world.
- Engineered obstacle-based gameplay, integrating a narrative that unfolds as players progress through stages.

Scotland Yard Board Game | *Java*

Mar 2023 – May 2023

- Engaged in a pair programming project to implement the logic for the Scotland Yard Board Game, incorporating design patterns including the Factory Pattern, Observer Pattern, and Visitor Pattern.
- Developed AI models for in-game characters (Mr. X and Detectives) using algorithms such as Dijkstra for efficient pathfinding and minimax with alpha-beta pruning for strategic decision-making.

TECHNICAL SKILLS

Programming Languages: Python, Java, Golang, C, C++, C#, Haskell

Web Technologies: JavaScript, React, HTML, CSS

Platforms and Tools: Git, AWS, Unity

Software Proficiency: Microsoft Office (Word, Excel, PowerPoint)