

REDOUN ISLAM

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RESEARCH INTERESTS

Human-Computer Interaction (HCI), computational models of visual attention and saliency for user interfaces, eye tracking, adaptive and AI-assisted interface design, AR/VR interaction, player modelling, and human-centred evaluation of interactive systems.

EDUCATION

Bachelor of Science in Computer Science

Expected June 2027

University of the People

Current GPA: 3.60 / 4.00

Accredited by the WASC Senior College and University Commission (WSCUC), a U.S. regional accreditor.

Khulna University, Bangladesh

2016 – 2020

Computer Science and Engineering coursework; credits accepted toward B.S. at University of the People

RESEARCH EXPERIENCE

Undergraduate Thesis

2019 – 2021

Rice Leaf Disease Recognition Using Local Threshold-Based Segmentation and Deep Convolutional Neural Networks

Khulna University, Bangladesh

- Developed an image-segmentation and deep-learning pipeline for recognizing rice-leaf diseases.
- Compared VGG, ResNet, and DenseNet architectures on a field-image dataset.
- Curated and preprocessed image data obtained from the Bangladesh Rice Research Institute (BRRI).
- Evaluated how local threshold-based segmentation affected classification performance.

Publication

Islam, A., **Islam, R.**, Haque, S. M. R., Islam, S. M. M., & Khan, M. A. I. (2021). "Rice Leaf Disease Recognition Using Local Threshold-Based Segmentation and Deep CNN." *International Journal of Intelligent Systems and Applications*, 13(5), 35–45.

DOI: [10.5815/ijisa.2021.05.04](https://doi.org/10.5815/ijisa.2021.05.04) • [Full text](#) • 72 citations (Google Scholar, September 2026)

PROFESSIONAL EXPERIENCE

Mid-Senior Game Developer

August 2025 – Present

Thunder Games

- Design and implement interactive gameplay, UI, combat, and progression systems in Unity using C#.
- Develop reusable software architectures for real-time interactive applications.
- Instrument gameplay systems and analyze player interactions to support balancing and iterative design.
- Collaborate with designers and engineers to translate user-facing requirements into tested interactive features.

Game Developer

September 2021 – August 2025

Manabreak LLC

- Developed production-ready interactive prototypes and gameplay systems in Unity and C#.
- Implemented physics-based interaction, soft-body deformation, momentum-based locomotion, and procedural content-generation systems.
- Designed extensible architectures for rapid experimentation and external integration.
- Maintained, debugged, and extended large C# codebases across multiple concurrent projects.

Software Engineer

April 2020 – August 2025

Free Pixel Games Ltd.

- Developed and shipped Unity-based mobile games for Android and iOS, including titles exceeding one million installations.
- Implemented user interfaces, gameplay systems, progression mechanics, analytics, and remote-configuration features.
- Built more than 50 interactive prototypes from concept to working software, including augmented-reality applications.
- Optimized real-time performance and application size across mobile platforms.

PROJECTS

VR Fire Extinguisher Training | Unity, Oculus Go

- Virtual-reality training demo with controller-ray menu selection, separate learning and training modes, and a timed extinguisher scenario with spray and fire feedback.

Game Menu Attention | Unity, C#, Python, TensorFlow

- Short demo integrating the published UEyes UMSI++ saliency model into a Unity game menu to compare a model's predicted attention across button layouts. Write-up: redounislam.xyz.

Adaptive Sokoban — Behavior-Aware Puzzle Generation | Unity, C#

- Research prototype that observes how players solve Sokoban puzzles and generates the next solver-verified challenge between levels.
- Tracks pushes, undos, restarts, repeated states and deadlock events, then applies transparent adaptation rules. Working prototype, evaluation in progress. Playable at redounislam.xyz.

Turbo Tag | Unity, C#

- Racing game with physics-based vehicle handling and control tuning, built for the CrazyGames Game Jam.
- 4th place worldwide; €700 prize and publishing agreement.

Falloon / Counting Mario | Unity, C#

- Rapid-prototyped interactive games built under game-jam time constraints.
- Two-time Champion, Brain Jam, Brain Station 23.

Rescue Cop: Shooting Game | Unity, C#

- Core combat and weapon systems, skill-progression mechanics, and UI framework implementation.
- Featured on Google Play Pass.

Crab Life — Idle RPG / Rescue Agent: Shoot & Hunt | Unity, C#

- Core gameplay loops, progression systems, and post-launch balance and content updates on live titles.

Jurassic Sea Attack / Dino Water World 3D | Unity, C#

- Feature development on live titles with 1M+ installations each.
- Analytics, remote configuration, and monetization SDK integration.

Grameenphone Consultancy Platform | Web, Payment API

- Consultancy platform for rural students with Grameenphone payment integration.

RESEARCH AND TECHNICAL SKILLS

Programming: C#, Python, C/C++

AI and Machine Learning: CNNs, image segmentation, saliency and attention models (UMSI++), TensorFlow / Keras, OpenCV, computer vision

Human-Centred Systems: Unity UI, interaction logging, attention-heatmap visualisation, layout comparison workflows, player modelling, usability-oriented prototyping

Interactive Systems: Unity3D, AR/VR prototyping, WebGL builds, physics simulation, procedural content generation, AI behaviour systems

Tools and Platforms: Git, Bitbucket, Firebase, Unity Profiler, Blender, Jira, ClickUp, Android, iOS, Visual Studio, JetBrains Rider, VS Code

AWARDS AND ACHIEVEMENTS

- CrazyGames Game Jam — 4th place worldwide; €700 prize and publishing agreement (2025).
- Brain Jam, Brain Station 23 — Champion, two-time winner.
- Get In The Ring Global — Joint winner; fully funded Global Meet Up, Montréal (2021), as co-founder of EasyLin.
- Grameenphone API Hackathon — 2nd Runner-up (BDT 50,000).
- KU CLUSTER Hackathon, Khulna University — Winner.
- Global Food Summit Idea & Research Competition — Finalist.

CERTIFICATIONS

- Unity Certified Associate: Game Developer — Unity Technologies.