S M Asiful Huda

+82 010 4649 2988 | shamsasif@chosun.ac.kr | s-masif.github.io

Education

4.4/4.5 **MS in Computer Engineering**, *Chosun University* | Gwangju, South Korea *2021-23*

2.8/4.0 **BSc in Computer Science & Engineering**, *East West University* | Dhaka, Bangladesh *2015-19*

Experience

Healthcare Technology Core Lab, *Researcher* | Gwangju, South Korea *Apr 2023 - Dec 2023*

- Developed an **immersive AR application** for **HoloLens 2** that enables **medical training** , with **Unity3D programming** and leveraging HoloLens hardware capabilities, resulting in a better user experience.
- **Wrote 20+** clean and efficient **Unity scripts in C#** within the **Unity3D framework**, **crafting AR functionalities and interactions** for immersive experiences.
- Conducted extensive **testing and debugging** of AR applications, identifying and resolving issues through testing, resulting in a **40% reduction in bug reports** and ensuring a stable and user-friendly experience

MCL Lab, *Graduate Research Assistant* (Prof. Sangman Moh) | Gwangju, South Korea *March 2021 - Feb 2023*

- Performed research on **computation offloading in Aerial computing**, resulting in the publication of two papers, including a **survey with 50+ citations.**
- Conducted extensive experiments and analysis to demonstrate that the **RL-based** approach **reduces both energy consumption and processing delay** by a minimum of **11%**, focusing on task-heterogeneity as a key factor.
- Presented research findings at 2 international conferences.

Technology and Business Solution Ltd, *Software Engineer* | Dhaka, Bangladesh *Oct 2019 - Feb 2021*

- Created **20+ HR software features** in HRCap-ERP for streamlined overtime and loan processing, uploading yearly tax return submission, and approval flow-enabled leave management, **reducing processing time by 30%** and enhancing HR efficiency.
- Used **C#, ASP.NET MVC, and SQL** to develop clean and maintainable back-end business logic following **DRY and repository pattern**, reducing development time by **20%** and code redundancies by **30%**.
- Collaborated with the other engineers and QA team to address and rectify **200+ bugs, issues, and client recommendations**, improving **overall application quality** and user satisfaction.

Publications

Journal

- 1. **S. M. A. Huda** and S. Moh, "**Deep Reinforcement Learning-Based Computation Offloading in UAV Swarm-Enabled Edge Computing for Surveillance Applications**," IEEE Access, Vol. 11, Issue 1, pp. 68269-68285, doi: 10.1109/ACCESS.2023.3292938, July 6, 2023.
- 2. A. M. Raivi, **S. M. A. Huda**, M. M. Alam, and S. Moh, "**Drone Routing for Drone-Based Delivery Systems: A Review of Trajectory Planning, Charging, and Security**," Sensors, Vol. 23, Issue 3, Article No. 1463, 26 pages (pp. 1-26), doi: 10.3390/s23031463, Jan. 28, 2023.
- 3. **S. M. A. Huda** and S. Moh, "**Survey on Computation Offloading in UAV-Enabled Mobile Edge Computing," Journal of Network and Computer Applications**, Vol. 201, pp. 1-26, doi: 10.1016/j.jnca.2022.103341, May 2022.
- 4. **S. M. A. Huda**, M. Y. Arafat, and S. Moh, "**Wireless Power Transfer in Wirelessly Powered Sensor Networks: A Review of Recent Progress**," Sensors, Vol. 22, Issue 8, Article No. 2952, 34 pages (pp. 1-34), doi: 10.3390/s22082952, Apr. 12, 2022.

Conference

- 1. **S. M. A. Huda** and S. Moh, "**Transfer Learning Algorithms in Unmanned Aerial Vehicle Networks: A Comprehensive Review**," Proc. of 11th Int. Conf. on Smart Media and Applications (SMA 2022), pp. 9-14, Saipan, USA, Oct. 19-22, 2022. (organized by KISM and KISTI)
- 2. **S. M. A. Huda**, E. M. Mahir, A. A. Tanvir, and S. Moh, "**Evaluation of Machine Learning Models for Detecting Network-Based Intrusions**," Proc. of 10th Int. Conf. on Smart Media and Applications (SMA 2021), pp. 27-31, Gunsan, Korea, Sep. 9-11, 2021. (organized by KISM and ACM)
- 3. Abdullah-All-Tanvir, E. M. Mahir, **S. M. A. Huda** and S. Barua, "**A Hybrid Approach for Identifying Authentic News Using Deep Learning Methods on Popular Twitter Threads**," 2020 International Conference on Artificial Intelligence and Signal Processing (AISP), 2020, pp. 1-6, doi: 10.1109/AISP48273.2020.9073583.
- 4. **S. M. A. Huda**, M. M. Shoikot, M. A. Hossain and I. J. Ila, "**An Effective Machine Learning Approach for Sentiment Analysis on Popular Restaurant Reviews in Bangladesh**," 2019 1st International Conference on Artificial Intelligence and Data Sciences (AiDAS), 2019, pp. 170-173, doi: 10.1109/AiDAS47888.2019.8970976.
- 5. **S. M. A. Huda**, IJ Ila, S Sarder, M Shamsujjoha, MNY Ali, "**An improved approach for detection of diabetic retinopathy using feature importance and machine learning algorithms**", *2019 7th International Conference on Smart Computing & Communications (ICSCC)*, Curtin University, Miri, Sarawak, Malaysia, June 28-30, 2019.

Skills

Programming/Language Python, C/C++, C#, ASP.NET, ASP.NET MVC, SQL, LINQ, Tensorflow

Web HTML, CSS, JS, jQuery Ajax, Bootstrap

Software/Tools Visual Studio, MS SQL Server, Pycharm, Unity Engine

Awards

2021-23 **Fully Funded Research Scholarship (KRW 21,068,000),** National Research Foundation of Korea (Gwangju, KR) *South Korea*

2021-22 **Top 15% Excellent Student Scholarship (KRW 4,950,000),** Chosun University (Gwangju, KR) *South Korea*

2019 **Travel Grant for ICSCC2019 (USD 750),** East West University (Dhaka, BD) *Bangladesh*