Abdullah Al Masud

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RESEARCH INTEREST

Robotics, Computer Vision, Machine Learning, Meta-Learning

EDUCATION

United International University   *Dhaka, Bangladesh*

Bachelor of Science in Computer Science and Engineering, Data Science   *Oct. 2018 – Sept. 2023*

- CGPA: 3.62/4.00

- Thesis Title: Meta Learning in Supervised Machine Learning
  We developed a framework that extracts meta-data about a dataset to support decision-making in selecting an appropriate algorithm for the dataset.

RESEARCH AND PUBLICATIONS

Published Papers | Conference

[1] **A. Al Masud**, S. Hossain, M. Rifa, F. Akter, A. Zaman, DM. Farid. Meta-learning in supervised machine learning. *In 14th International Conference on Software, Knowledge, Information Management and Applications (SKIMA 2022), pages 1–6, Phnom Penh, Cambodia, December 2022.* doi:10.1109/SKIMA57145.2022.10029537

Research In Progress | Journal

[1] **A. Al Masud**, S. Hossain, M. Rifa, F. Akter, A. Zaman, DM. Farid. Xpert: An End-to-End Algorithm Recommender System for Supervised Dataset.

[2] Development of a Mars Rover Prototype: Autonomous Navigation and Life Exploration.
This study showcases how our human helper rover, "Maven", assesses subsystems for planetary exploration in URC 2022, addressing fundamental and mission-specific functionalities, evaluating performance through scenario-based tests, and assessing criteria such as resilience, navigability, traversability, and mechanical qualities, including an autonomous navigation system and a novel life exploration subsystem.

[3] Collaborative AI for Validity of Cancer Classification
We interviewed specialists and work on a cancer classification model capable of reasoning to provide as collaborative AI in medicine for decision making, from sample histopathology images.

[4] Autonomous Systems with Reinforcement Learning
In this research, we integrate Reinforcement Learning into our current UIU Mars rover vision framework, dependent on RGBD images to navigate rugged and unknown terrains.

WORK EXPERIENCE

W1 . **Software and Autonomous Team lead**, UIU Mars Rover team.   *2021 - 2023*

W2 . **Undergraduate Teaching Assistant**, United International University   *Spring 2019 - Summer 2022*

W3 . **Web Master**, UIU Robotics Club and UIU Mars Rover team   *2022- 2023*

W4 . **R&D Lead** , UIU Robotics Club   *2021- 2022*

W5 . **Publication and Organizing Team**, Asia-Oceania Congress of Medical Physics (AOCMP)   *Dec 2021*

AWARDS AND HONORS

A1 . **Champions in Asia and ranked 9th global** *2023*
University Rover Challenge-2023 | The Mars Society *Hanksville, Utah, USA*

- As the Software and Autonomous Team Lead, I overhauled the navigation framework and GUI based on URC-2022 experience, enhancing modularity and effectiveness.

A2 . **Champions in Asia and ranked 13th global** *2022*
University Rover Challenge-2022 | The Mars Society *Hanksville, Utah, USA*

- As the Software and Autonomous Team Lead, I engineered our customised-ROS based navigation framework and GUI from scratch for the competition, aligning with mission requirements.

A3 . **Ranked 3nd global and winners in Material Science** *2023*
Anatolian Rover Challenge | UKET Space Exploration Society *Ankara, Türkiye*

- As the Software and Autonomous Team Lead. I tuned the navigation framework further based on our experience from URC2023, specific for ARC-2023.

A4 . **Scholarship in 5 Trimesters**. *2018 - 2023*
United International University *Dhaka, Bangladesh*

REFERENCES

Dr. Dewan Md. Farid *Dhaka,Bangladesh*
Professor, Department of CSE, UIU
Dhaka,Bangladesh

Mr. Akib Zaman *Cambridge, MA, USA*
PhD Candidate, Department of EECS, MIT
Cambridge, MA, USA

Dr. Salekul Islam *Dhaka,Bangladesh*
Professor, Department of CSE, UIU
Dhaka,Bangladesh