

RIDWAN MAHBUB

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EDUCATION

M.Sc. in Computer Science September 2024 - Present
York University
- Supervised by Dr. Enamul Hoque

B.Sc. in Computer Science and Engineering Jan 2019 - May 2023
Islamic University of Technology
- CGPA: 3.9 / 4.0

RESEARCH INTERESTS

Natural Language Processing | Large Language Models | Machine Learning | Data Visualization

PUBLICATIONS

❑ From Charts to Fair Narratives: Uncovering and Mitigating Geo-Economic Biases in Chart-to-Text

Accepted at EMNLP 2025 🔗

This paper systematically benchmarks vision-language models on chart-to-text generation and uncovers systemic geo-economic biases, showing that models tend to favor high-income countries in their summaries even when describing the same chart.

❑ The Perils of Chart Deception: How Misleading Visualizations Affect Vision Language Models

Accepted at IEEE VIS 2025 (Awarded Best Short Paper) 🔗

This paper introduces the first large-scale benchmark of vision-language models on deceptive chart designs, revealing that even state-of-the-art models are vulnerable to subtle visual distortions.

❑ DashboardQA: Benchmarking Multimodal Agents for Question Answering on Interactive Dashboards

PrePrint 🔗

This paper introduces DashboardQA, the first benchmark for evaluating the capabilities of vision-language models in interactive dashboard navigation through question answering.

❑ LLM-Based Data Science Agents: A Survey of Capabilities, Challenges, and Future Directions

PrePrint 🔗

This paper presents the first comprehensive survey of LLM-based data science agents, mapping 45 systems across the data science lifecycle and revealing major gaps in trust, deployment, and business understanding while outlining paths toward robust and trustworthy automation.

❑ Judging the Judges: Can Large Vision-Language Models Fairly Evaluate Chart Comprehension and Reasoning?

Accepted at ACL 2025, Industry Track 🔗

This paper presents the first comprehensive study of open-source vision-language models as automatic judges for chart comprehension and reasoning, highlighting their potential as cost-effective evaluators while also exposing persistent biases.

- ❑ **Deploying Tiny LVLM Judges for Real-World Evaluation of Chart Models: Lessons Learned and Best Practices**

Accepted at EMNLP 2025, Industry Track [↗](#)

This paper introduces ChartJudge-2B, a compact 2B-parameter vision-language model for chart evaluation. Using multi-criteria prompting and domain-adaptive transfer learning, it achieves near-7B performance while cutting inference time and cost by over half.

- ❑ **Learning or Cheating? Assessing Data Contamination in Large Vision-Language Models**

Accepted at IEEE Workshop on ML for Signal Processing 2025 [↗](#)

This paper presents a systematic framework for detecting data contamination in large vision-language models, showing that models exhibit notable accuracy drops under controlled perturbations, revealing that current VLMs still rely heavily on memorized examples rather than true multimodal reasoning.

- ❑ **Unveiling the Essence of Poetry: Introducing a Comprehensive Dataset and Benchmark for Poem Summarization**

Accepted at EMNLP 2023 [↗](#)

This work benchmarks the creative language understanding and summarizing capacity of language models and highlights numerous short-comings of prevalent text summarization models.

- ❑ **A Comparative Analysis of Efficient Convolutional Neural Network Based Methods for Plant Disease Classification**

Accepted at ICCIT 2022 [↗](#)

The work delves into the complexities of plant disease classification, covering aspects such as available datasets, transfer learning, and a comparative analysis of lightweight CNN models for leaf disease.

PROFESSIONAL EXPERIENCE

- ❑ **National Research Council (NRC) Canada** [↗](#) September, 2025 - Present
Cyber Security Intern, Cybersecurity Team
Domain knowledge infusion into LLMs for cyber-security tasks.
- ❑ **York University** [↗](#) September, 2024 - Present
Teaching/Research Assistant, Electrical Engineering and Computer Science
TA for EECS 1015 (Intro. to Computer Science); RA during Summer term.
- ❑ **Bangladesh University of Business and Technology** [↗](#) July, 2023 - August, 2024
Lecturer, Computer Science and Engineering
Courses: Operating Systems, Operating Systems Lab and Numerical Analysis Lab.
- ❑ **Nilavo Technologies** [↗](#) May, 2022 - July, 2022
Software Development Intern
Worked on an internal project management tool used daily by 50+ employees.
- ❑ **HawarIT Limited** [↗](#) July, 2021 - August, 2021
Machine Learning Intern
Worked on different computer vision projects including traffic sign detection.

AWARDS

- ❑ Best Short Paper Award, IEEE VIS 2025
- ❑ Best Presentation of the Session, ICCIT 2022
- ❑ York University Graduate Fellowship, 2024 - 2026
- ❑ First runner-up, Hackathon, Undergraduate University