

RIDWAN MAHBUB

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EDUCATION

M.Sc. in Computer Science York University - Supervised by Dr. Enamul Hoque	September 2024 - Present
B.Sc. in Computer Science and Engineering Islamic University of Technology - CGPA: 3.9 / 4.0	Jan 2019 - May 2023

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

❑ York University Graduate Fellowship, 2024 - 2026

❑ Best Presentation of the Session, ICCIT 2022

❑ First runner-up, Hackathon, Undergraduate University