AHMED MASRY

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RESEARCH HIGHLIGHTS

- **Papers: ACL** (22, 24, 25), **EuroVis** (22), **EMNLP** (23, 24), **COLING** (25), **ICLR** (25), **COLM** (25), **NeurIPS** (25)
- **Workshop Papers: CVPR 21** [Best Paper Award], **AAAI** (24), and **ICLR** (25).
- **Research Impact:** 2000+ citations, h-index of 13 on Google Scholar.
- **Awards**: NSERC CGS-D ($120K CAD) & Google PaliGemma Academic Grant ($5K USD).
- **Benchmark Contribution:** Creator of **ChartQA** Benchmark, cited by GPT-4 & Gemini; 1100+ citations.
- **Modeling Contributions:** Multimodal chart and document models with **300K+ downloads** on HuggingFace
- **Research Interests:** Vision-Language Models, Document & Chart Comprehension, Large Language Models.
- **Media Coverage:** ChartGemma featured in MarketTechPost and ChartInstruct in LG AI Research Blogs.

SELECTED PAPERS

- "AlignVLM: Bridging Vision and Language Latent Spaces for Multimodal Understanding" **(NeurIPS 2025)**
  A. Masry, J. A. Rodriguez, T. Zhang, S. Wang, C. Wang, A. Feizi, A. K. Suresh, A. Puri, et al.
- "BigCharts-R1: Enhanced Chart Reasoning with Visual Reinforcement Finetuning" **(COLM 2025)**
  A. Masry, A. Puri, M. Hashemi, J, A. Rodriguez, M. Thakkar, et al.
- "ChartQAPro: A More Diverse and Challenging Benchmark for Chart Question Answering" **(ACL 2025)**
  A. Masry, M. S. Islam, M. Ahmed, A. Bajaj, F. Kabir, A. Kartha, et al.
- "ChartGemma: Visual Instruction-tuning for Chart Reasoning in the Wild" **(COLING Industry 2025)**
  A. Masry*, M. Thakkar*, A. Bajaj, A. Kartha, E. Hoque, S. Joty.
- "Are Large Vision Language Models up to the Challenge of Chart Comprehension and Reasoning? An Extensive Investigation into the Capabilities and Limitations of LVLMs" **(EMNLP 2024)**
  M. S. Islam, R. Rahman, **A. Masry**, Md T. R. Laskar, M. T. Nayeem, E. Hoque.
- "ChartInstruct: Instruction Tuning for Chart Comprehension and Reasoning" **(ACL 2024)**
  A. Masry*, M. Shahmohammadi*, M. R. Parvez, E. Hoque, S. Joty.
- "UniChart: A Universal Vision-language Pretrained Model for Chart Comprehension and Reasoning" **(EMNLP 2023)**
  A. Masry*, P. Kavehzadeh*, X. L. Do, S. Joty, E. Hoque.
- "ChartQA: A Benchmark for Question Answering about Charts with Visual and Logical Reasoning" **(ACL 2022)**
  A. Masry, D. Long, J. Q. Tan, S. Joty, E. Hoque.
- "Chart-to-Text: A Large-Scale Benchmark for Chart Summarization" **(ACL 2022)**
  S. Kantharaj*, R. T. Ko Leong*, X. Lin*, **A. Masry***, M. Thakkar*, E. Hoque, S. Joty.
- "Chart Question Answering: State of the Art and Future Directions" **(EuroVis 2022)**
  E. Hoque, P. Kavehzadeh, **A. Masry**.
- "Integrating Image Data Extraction and Table Parsing Methods for Chart Question Answering"
  A. Masry, E. H. Prince. Chart Question Answering Workshop, **CVPR 2021** [**Best Workshop Paper Award**]

EDUCATION

York University, Ontario September 2024 - Present
Ph.D., Electrical Engineering & Computer Science *GPA: Exceptional, A+*

York University, Ontario September 2020 - June 2022
Master of Science, Computer Science *GPA: Exceptional, A+*

Koç University, Turkey (Ranked 1st in Turkey) September 2017 - June 2020
Bachelor of Science, Computer Engineering *GPA: 3.9/4.0*

WORK EXPERIENCE

Mila - Quebec Artificial Intelligence Institute. Sept 2025 - Dec 2025
Visiting Researcher, Advisor: Dr. Aaron Courville *Montreal, Quebec*
- Improving the long video understanding capabilities in vision-language models (VLMs).
- Experiment with world and latent action models to represent long videos more efficiently in VLMs by reducing token count.

ServiceNow Research Sept 2024 - July 2025
Visiting Researcher, Multimodal Document AI. Advisor: Sai Rajeswar *Montreal, Quebec*
- Assisting in building multimodal document understanding datasets and benchmarks (**ICLR 2025**).
- Built SFT datasets and a novel RL reward to enhance mathematical visual reasoning in VLMs (**COLM 2025**).
- Designed VLM architectures to improve the alignment between vision encoders and LLMs for documents (PDFs, charts, tables) (**NeurIPS 2025**).
- Improved multimodal document retrieval in ColPali by +3% NDCG@5 using a novel similarity function and pretraining objectives (**EMNLP Industry Track 2025**).

Intelligent Visualization Lab, York University Sept 2020 - Present
Research Assistant & Associate, MultiModal Chart AI *Toronto, Ontario*
Advisor: Dr. Enamul Hoque, *Collaborator*: Dr. Shafiq Joty from **Salesforce AI Research**
- Conducting research in partial fulfillment of Master's and PhD requirements.
- Developed multimodal chart benchmarks: ChartQA, Chart2Text, and ChartQAPro
- Trained UniChart, ChartInstruct, and ChartGemma, state-of-the-art universal chart comprehension models using novel self-supervised pretraining objectives and Visual Instruction Tuning.

Arteria AI May 2022 - Sept 2024
Senior Data Scientist (Promoted in January 2024) *Toronto, Ontario*
- Developed a multimodal NER and relation extraction pipeline to extract financial transactions from interbank notices, winning a competition among 19 startups and securing a contract with a major Canadian bank.
- Interpreted client requirements, designed solutions, and led junior data scientists in implementation.

AWARDS

NSERC CGS-D May 2025
A prestigious national award to support outstanding PhD students ($120K CAD). *Toronto, Ontario*

Ontario Graduate Scholarship (OGS) [Declined in favor of NSERC CGS-D] May 2025
A prestigious provincial award to support outstanding PhD students ($45K CAD). *Toronto, Ontario*

Mitacs Accelerate Award January 2025
15K CAD to support my research internship at ServiceNow Research. *Montreal, Quebec*

Google PaliGemma Academic Award August 2024
GCP Credits Award of 5K USD to support my research with the PaliGemma model. *Virtual*

Al Ghurair Foundation for Education STEM scholarship Program (AGFE) September 2017 - June 2020
A merit-based award for highly achieving Arab students to pursue a fully funded STEM degree. *Istanbul, Turkey*

Vehbi Koc Scholar And Dean's Honor Roll May 2018 - June 2020
Merit-based awards for Academic Excellence. *Istanbul, Turkey*

CVPR 2021 Chart Question Answering Workshop June 2021
Achieved Best Paper Award. *Virtual*

ACTIVITIES

Arabic NLP Winter School January 2025
Participant at MBZUAI campus. *Abu Dhabi, UAE*

Multimodal AI Winter School December 2024
Visiting Researcher to Saudi Data & AI Authority (SDAIA). *Riyadh, Saudi Arabia*

Al-Ghurair Foundation (AGFE) December 2018 - January 2020
Student Ambassador. (Lebanon & Turkey hub). *Istanbul, Turkey*
- Selected as one of 33 outstanding students from 700 AGFE scholars worldwide to represent the Foundation and its values.

Robotics Craftsmanship International Academy (University of Coimbra) June 2018 - August 2018
Participant & Contestant *Coimbra, Portugal*
- Ranked 1st in the sumo robots competition, and in the top 10 out from 84 participants.

RESEARCH TALKS

Data Visualization Understanding with VLMs December 2025
Invited Speaker at McGill University (McGill NLP Group) *Montreal, Quebec*

NLP+Vis: Data Visualization Understanding with VLMs September 2025
Invited Speaker at Koc University *Istanbul, Turkey*

Multimodal Chart Understanding with VLMs March 2025
Invited Speaker at Alexandria University *Alexandria, Egypt*