

# Yeasir Rayhan

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<https://yeasirrayhanprince.github.io/>

## Education

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| 08/2021 -<br>05/2026 (exp) | Ph.D. in Computer Science<br>Purdue University<br>Advisor: Walid G. Aref   |
| 2018                       | B.Sc. in Computer Science & Engineering<br>Bangladesh University of Engineering and Technology (BUET)<br>Advisor: Tanzima Hashem<br>Thesis: Efficient Scheduling of Generalized Group Trips in Road Networks |

## Past Employment

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|-------------------|--|
| May '23 - Jun '23 | Intern Database Software Engineer<br>ITTIADB, Bellevue, WA   |
| May '21 - May'23  | Research Assistant<br>Purdue University. Advisor: Walid G. Aref.   |
| Jan '21 - Aug '21 | Research Assistant<br>Bangladesh University of Engineering and Technology (BUET). Advisor: Tanzima Hashem. |

## Publications

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| aiDM '25       | <b>Yeasir Rayhan</b> and Walid G. Aref. <b>Exploring Next Token Prediction For Optimizing Databases</b> . In aiDM@SIGMOD 2025.  |
| SIGMOD '25     | Libin Zhou, Lu Xing, <b>Yeasir Rayhan</b> , Walid G. Aref. <b>GTX: A Write-Optimized Latch-free Graph Data System with Transactional Support</b> . In ACM SIGMOD 2025.  |
| SIGSPATIAL '23 | <b>Yeasir Rayhan</b> and Walid G. Aref. <b>SIMD-ified R-tree Query Processing and Optimization</b> . In Proceedings of the 31st ACM International Conference on Advances in Geographic Information Systems.   |
| EDBT '23       | <b>Yeasir Rayhan</b> , Tanzima Hashem, Muhammad Aamir Cheema, Hua Lu, Mohammed Eunus Ali. <b>An Efficient Approach for Indoor Facility Location Selection</b> . In Proceedings of the 26th International Conference on Extending Database Technology. |
| TSAS '23       | <b>Yeasir Rayhan</b> and Tanzima Hashem. <b>AIST: An Interpretable Attention-Based Deep Learning Model for Crime Prediction</b> . In Volume 9 of ACM Transactions on Spatial Algorithms and Systems.  |
| TSAS '19       | <b>Yeasir Rayhan</b> , Tanzima Hashem, Roksana Jahan, and Muhammad Aamir Cheema. 2019. <b>Efficient Scheduling of Generalized Group Trips in Road Networks</b> . In Volume 5 of ACM Transactions on Spatial Algorithms and Systems.                   |

## Preprints

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| Arxiv '25 | <b>Yeasir Rayhan</b> and Walid G. Aref. <b>Revisiting Page Migration for Main-Memory Database Systems</b> . Submitted to ADMS'25, VLDB |
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Arxiv '24	<b>Yeasir Rayhan</b> and Walid G. Aref. <b>P-MOSS: Learned Scheduling For Indexes Over NUMA Servers Using Low-Level Hardware Statistics.</b>
Arxiv '22	Walid G. Aref, Ahmed M. Aly, Anas Daghistani, <b>Yeasir Rayhan</b> , Jianguo Wang, Libin Zhou. <b>ILX: Intelligent "Location+X" Data Systems.</b>

## Ongoing Works

In preparation	<b>Yeasir Rayhan</b> and Walid G. Aref. Profile Guided Learned Database Kernels.
In preparation	Syed Muhammed Abubaker, Nada M.Elkindi, <b>Yeasir Rayhan</b> , Ahmed R. Mahmood and Walid G. Aref. Spatio-Temporal Access Methods: Part 4 (2017-2024).
In preparation	Gautam Choudhary, Libin Zhou, <b>Yeasir Rayhan</b> and Walid G. Aref. An Evaluation of Machine Learning Techniques for Estimating Shortest Path Distances in Road Networks [Experiment].

## Talks

Purdue CS Grad Symposium'25	Profile-Guided Learned Database Kernels
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## Honors

2023	Travel Award, ACM SIGSPATIAL
2019	Regional Winner (Asia), The Global Undergraduate Awards (Computer Science)

## Teaching

Fall, Spring '25	Teaching Assistant, Purdue University CS348: Information Systems
Fall, Spring '24	Teaching Assistant, Purdue University CS348: Information Systems
Fall '23	Teaching Assistant, Purdue University CS448: Introduction To Relational Database Systems
Spring '22	Teaching Assistant, Purdue University CS 180: Problem Solving And Object-Oriented Programming
Fall '21	Teaching Assistant, Purdue University CS 180: Problem Solving And Object-Oriented Programming

## Skills

PL	C/C++, Python , Java
ML Framework	PyTorch, PyTorch Geometric