

# TASFIA ZAHIN

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<https://github.com/TasfiaZahin>

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|------------------|--|-------------------------------------|
| EDUCATION        | <b>The Pennsylvania State University</b><br><i>Ph.D. Candidate, Computer Science and Engineering</i>   | Pennsylvania, USA<br>2021 - Present |
|                  | <ul style="list-style-type: none"><li>• Advisor: Dr. Mingfu Shao</li><li>• Research area: Computational Biology</li></ul>  |                                     |
| WORK EXPERIENCE  | <b>Bangladesh University of Engineering and Technology (BUET)</b> Dhaka, Bangladesh<br><i>BS.c. in Computer Science and Engineering</i>  | 2015 - 2019                         |
|                  | <ul style="list-style-type: none"><li>• CGPA: 3.90/4.00</li></ul>  |                                     |
| PUBLICATIONS     | <b>The Pennsylvania State University</b><br><i>Graduate Research/Teaching Assistant</i>  | Pennsylvania, USA<br>2021 - Present |
|                  | <b>Ahsanullah University of Science and Technology (AUST)</b> Dhaka, Bangladesh<br><i>On study leave, Department of Computer Science and Engineering</i>   | 2019 - Present                      |
| TECHNICAL SKILLS | <b>Dhamondi Tutorial</b><br><i>Teacher</i>   | Dhaka, Bangladesh<br>2019           |
|                  | <ol style="list-style-type: none"><li>1. <b>Tasfia Zahin</b>, Irtesam Mahmud Khan, Mingfu Shao. Accurate Reconstruction of Circular RNAs from Complex Rolling Circular Long Reads with CircPlex. <i>bioRxiv</i>, 2025. <i>Under review at ISMB 2026</i>.</li><li>2. Zhezheng Song*, <b>Tasfia Zahin*</b>, Xiang Li, Mingfu Shao. Accurate Detection of Tandem Repeats from Error-Prone Sequences with EquiRep. <i>Proceedings of 29th International Conference on Research in Computational Molecular Biology (RECOMB 2025)</i>. <i>Genome Research</i>, 2024.</li><li>3. <b>Tasfia Zahin</b>, Qian Shi, Carl Zang, Mingfu Shao. Accurate Assembly of Circular RNAs with TERRACE. <i>Proceedings of 28th International Conference on Research in Computational Molecular Biology (RECOMB 2024)</i>. <i>Genome Research</i>, 2024.</li><li>4. Xiaofei Carl Zang, <b>Tasfia Zahin</b>, Irtesam Mahmud Khan, Qian Shi, Yi Xing, Mingfu Shao. Amaranth: Enhanced Single-Cell Transcript Assembly via Discriminative Modeling of UMI Reads and Internal Reads. <i>bioRxiv</i>, 2025. <i>Under review at ISMB 2026</i>.</li><li>5. Irtesam Mahmud Khan, Xiaofei Carl Zang, Ange Teng, <b>Tasfia Zahin</b>, Mingfu Shao. Boosting Transcript Assembly via Delineating Transcript Start and End Sites. <i>bioRxiv</i>, 2025. <i>Under review at Genome Biology</i>.</li><li>6. <b>Tasfia Zahin*</b>, Md Hasin Abrar*, Mizanur Rahman Jewel, Tahrina Tasnim, Md Shamsuzzoha Bayzid, Atif Rahman. An alignment-free method for phylogeny estimation using maximum likelihood. <i>BMC Bioinformatics</i>, 2025.</li></ol> |                                     |

**Languages:** C++, C, Python, Java, MATLAB, Assembly (Intel 8086)

**Scripting Languages:** LATEX, Bash

**Genome Browser:** Integrative Genome Browser (IGV)

**Deep Learning Libraries:** Keras, Pytorch

**Database Language:** SQL, PL/SQL

**Hardware:** Proteus, Atmel Studio, Arduino

## ACADEMIC EXPERIENCES

- Teaching assistant for CMPSC 465, Fall 2021, The Pennsylvania State University.
- Teaching assistant for CMPSC 465, Fall 2024, The Pennsylvania State University.
- Research and poster presenter at RECOMB 2025.
- Research presenter at RECOMB 2024.
- Sub-reviewer of ISMB 2026, RECOMB 2026, RECOMB 2025, WABI 2025, RECOMB 2024, ISMB 2024, WABI 2024, WABI 2023, RECOMB 2022, ACM-BCB 2022.
- Volunteer at the 2024 Workshop on Emerging Methods for Sequence Analysis (WEMSA 2024) organized by The Pennsylvania State University.
- Research presenter at the 2023 Workshop on Emerging Methods for Sequence Analysis (WEMSA 2023) organized by The Pennsylvania State University.
- Attendee of ISMB 2022 Conference at Madison, Wisconsin.
- Attendee of RECOMB 2020 Virtual Conference.
- Member of BUET CS Bioinformatics group, a platform for sharing ideas and related research topics.

## OTHER EXPERIENCES

- Member of IT support sub-committee, The 23rd International Conference on Computer and Information Technology (ICCIT) 2020, hosted by Ahsanullah University of Science and Technology (AUST).
- Member of executive committee, Ahsanullah University of Science and Technology (AUST) Robotics Club.
- Mentor of Bangladeshi Women in Computer Science and Engineering (BWCSE) Mentor-mentee program, Bangladesh University of Engineering and Technology (BUET).
- Member of Bangladeshi Women in Computer Science and Engineering (BWCSE), Bangladesh University of Engineering and Technology (BUET).
- Delegate of Bangladesh Youth Leadership Summit 2016.
- Adjudicator of BRAC Inter-University Debate Competition 2016.
- Member of Bangladesh University of Engineering and Technology (BUET) Debating Club.
- Media and Publication Secretary of English Medium Buetian's Association (EMBA), Bangladesh University of Engineering and Technology (BUET).

## AWARDS AND HONORS

- **Winner of Huawei Seeds for the Future**, 2019, Travel Grant by Huawei Technologies.
- **Dean's List Honor**, 2015-2019, Bangladesh University of Engineering and Technology (BUET).
- **Daily Star O and A Level Award of Excellence**, 2012 and 2014, The Daily Star Newspaper, Bangladesh.

## REFERENCE

### Dr. Mingfu Shao

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University Park, PA 16802  
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### Dr. Atif Hasan Rahman

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