SAEM HASAN

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Summary

I am currently conducting research in the field of bioinformatics phylogeny, specifically analyzing and inferring species and gene trees. My main objective is to enhance summary methods to better comprehend the evolutionary connections among biological entities.

RESEARCH INTERESTS

- **Bioinformatics**
- **Machine Learning**
- **Database**

EDUCATION

- **Bangladesh University of Engineering and Technology (BUET)** **(July 2023 - Present)**
  M.Sc. in Computer Science and Engineering (CSE)
- **Bangladesh University of Engineering and Technology (BUET)** **(April 2018 - May 2023)**
  B.Sc. in Computer Science and Engineering (CSE)
  CGPA: 3.96/4.00 Merit Position: 3/129
- **Dhaka City College** **(2017)**
  H.S.C.
  GPA: 5.00/5.00
- **Muragnagar D.R. Govt. Pilot High School** **(2015)**
  S.S.C.
  GPA: 5.00/5.00

TECHNICAL SKILLS

- **Languages:** C, C++, Java, Python, x86 Assembly, Bash
- **Frameworks:** Django, React.js, JavaFX, Tensorflow, LaTeX
- **Dev Tools:** Git, Visual Studio Code
- **Databases:** Oracle, MySQL, PostgreSQL
- **Other Skills:** Machine Learning

RESEARCH EXPERIENCES

- **STELAR: Beyond Rooted Gene Trees**
  Supervisor: **Dr. Md. Shamsuzzoha Bayzid**
  We are updating STELAR to estimate species trees even from rooted gene trees.

- **Phylogenomic Inference in the face of Species Tree Terraces: Challenges and Opportunities.**
  Supervisor: **Dr. Md. Shamsuzzoha Bayzid**
  We analyzed the challenges and opportunities presented by species tree terraces and explored ways to enhance current summary methods using them.

- **Improving QT-GILD: Quartet-based gene tree imputation using deep learning improves phylogenomic analyses despite missing data.**
  Supervisor: **Dr. Md. Shamsuzzoha Bayzid**
  We attempted to enhance the QT-GILD paper by rectifying the gene tree's estimation error.

WORK EXPERIENCE

- **Adjunct Lecturer**, Bangladesh University of Engineering & Technology June 2023 – Present

  1. (January 2023) Course Instructor @ Computer Security Sessional (CSE 406)
  2. (January 2023) Course Instructor @ Software Development Sessional (CSE 408)
  3. (January 2023) Course Instructor @ Database Sessional (CSE 216)
  4. (January 2023) Course Instructor @ Data Structures and Algorithms I Sessional (CSE 106)
  5. (January 2023) Course Instructor @ Object Oriented Programming Language Sessional (CSE 108)

PROJECTS

- **Travello.** Github
  Software Development Sessional
  Tools & Technologies: React.js, Django, RestAPI, PostgreSQL, Git
  Travelers can explore various locations on the website Travello. It will assist them in locating appropriate hotels, places to eat, and food in tourist areas.

- **ESPN CRIC-INFO.** Github
  Database Sessional
  Tools & Technologies: Django, Oracle, Javascript
  ESPN CRIC-INFO is a website that provides scorecards for various cricket events worldwide.

- **BERTSerini.** Github
  Machine Learning Sessional
  Tools & Technologies: Python, Pytorch
  BERTSerini is an end-to-end question-answering system that integrates BERT with the open-source Anserini information retrieval toolkit.

- **TCPW BR: A Wireless Congestion Control Scheme Base on RTT**
  Computer Networks Sessional
  Tools & Technologies: NS-3
  TCPW BR algorithm enhances the wireless network's ability to judge congestion and random errors.

- **Online Ticket Reservation System** Github
  Object Oriented Programming Language Sessional
  Tools & Technologies: Java, JavaFX, MySQL
  The Online Ticket Reservation System app allows you to book bus/train/movie tickets.

- **FIFA 18** Github

  Structured Programming Language Sessional

  Tools & Technologies: C, iGraphics

  FIFA 18 is a computer simulation of two-dimensional football.

References

- **Dr. Md. Shamsuzzoha Bayzid**
  Associate Professor
  Department of CSE, BUET
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- **Dr. Mohammad Saifur Rahman**
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Declaration

- I hereby declare that the above-mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above-mentioned.