

# Badhan Chandra Das

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## Education

- ◆ **Doctor of Philosophy** **CGPA: 3.96/4.00**  
Major: Computer Science. *Aug. 2022 – Present*  
Knight Foundation School of Computing and Information Science.  
Sustainability, Optimization, and Learning for InterDependent networks laboratory (**solid lab**).  
College of Engineering and Computing, Florida International University.
- ◆ **Master of Science** **CGPA: 3.80/4.00,**  
Major: Computer Science and Engineering. *2018-19*  
Institution: Jahangirnagar University, Savar, Dhaka, Bangladesh.
- ◆ **Bachelor of Science** **CGPA: 3.50/4.00,**  
Major: Computer Science and Engineering. *2014-17*  
Institution: Jahangirnagar University, Savar, Dhaka, Bangladesh.

## Research Experience

1. **Graduate Research Assistant**  
(a) Sustainability, Optimization, and Learning for Interdependent Networks laboratory. *Jan. 2024 - Present*  
(b) Privacy-preserving machine learning, AI security, and its Applications.
2. **Research Assistant**  
(a) Jahangirnagar University Data Mining (JU-DM) Research Group. *Aug. 2018 - Dec. 2020*  
(b) A research project funded by the University Grants Commission (UGC) of Bangladesh.
3. **Master's Thesis.**  
Title: Topic-Oriented Community Detection and Sentiment Mining in Online Social Network. *Feb. 2019 - Dec. 2020*
4. **Bachelor's Final Year Thesis.**  
Title: Attribute Driven Local Active Community Detection. *July. 2018 - Dec. 2018*

## Professional Experience

- ✓ **Florida Internatinal University.** *Aug. 2022 - Dec. 2023*  
Graduate Teaching Assistant,  
Knight Foundation School of Computing and Information Science.
- ✓ **Bangladesh University of Business and Technology (BUBT)** *Dec. 2020 - July 2022*  
Full-time Lecturer, Department of Computer Science and Engineering [On Study-Leave].  
Area of Teaching: Data Mining (Theory + Lab), Machine Learning, Database (Theory + Lab).
- ✓ **University of Development Alternative (UODA)** *May 2019 - Aug. 2019*  
Part-time Lecturer, Department of Computer Science and Engineering.  
Area of Teaching: Internet Technology (Theory + Lab).
- ✓ **Reviewer**
  1. Springer Journal of Supercomputing (SCI: Q1, IF: 3.3), 2024.
  2. IEEE International Conference on Distributed Computing Systems (ICDCS), USA, 2024.
  3. IEEE Asia-Pacific Conference on Computer Science and Data Engineering (CSDE), Australia, 2021, 2022, 2023.
  4. IEEE Access Journal (SCI: Q1, IF: 3.745), August 2021.
  5. International Conference on Machine Intelligence and Data Science Application (MIDAS- 2021).

## Awards, Grants, and Scholarships

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1. **Student Travel Grant** Nov. 2023  
NSF travel grant from International Conference on Bioinformatics and Biomedicine (BIBM-2023)
2. **Conference Travel Grant** Nov. 2023  
From Graduate and Professional Student Committee (GPSC) at Florida International University.
3. **Student Travel Award** 2022-23  
From Bangladesh Sweden Trust Fund
4. **Best Paper Award** Dec. 2021  
At International Conference on Machine Intelligence and Data Science Applications (MIDAS-2021), Bangladesh.
5. **Developing Country Researcher Award** Dec. 2020  
At 7<sup>th</sup> IEEE Asia-Pacific Conference on Computer Science and Data Engineering (CSDE-2020), Gold Coast, Australia.
6. **Scholarship on Conference Registration** Dec. 2020  
At IEEE CSDE/i-COSTE 2020 on the basis of research merit. Gold Coast, Australia.
7. **Special Research Grant from University Grants Commissions of Bangladesh (UGC)** 2019-20  
Project Title: Attribute Driven Active Local Community Detection.
8. **Yearly Scholarship Based on Academic Result of Undergraduate Period**  
For four consecutive years 2014, 2015, 2016, 2017.

## Publications

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### 1. Journal Papers:

- (a) **Badhan Chandra Das**, M. Hadi Amini, and Yanzhao Wu. "Security and Privacy Challenges of Large Language Models: A Survey" in ACM Computing Surveys, (**Journal Rank: Q1, SCI, IF: 16.6**) [Under Review].
- (b) Khandaker Mamun Ahmed, **Badhan Chandra Das**, Yasaman Saadati, M. Hadi Amini, "A Comprehensive Review of Artificial Intelligence and Machine Learning Methods for Modern Healthcare Systems" in Elsevier Journal of Artificial Intelligence In Medicine, (**Journal Rank: Q1, SCI, IF: 7.5**) [Under Review].
- (c) Jubayer Al Mahmud, **Bandhan Chandra Das**, Jungpil Shin, Khan Md Hasib, Rifat Sadik, MF Mridha, "3D Gesture Recognition and Adaptation for Human-Robot Interaction," in IEEE Access, vol. 10, pp. 116485-116513, 2022. (**Journal Rank: Q1, SCI, IF: 3.47**). [URL]
- (d) **Badhan Chandra Das**, Md. Musfique Anwar, Md. Al-Amin Bhuiyan, Iqbal H. Sarker, Salem A. Alyami, and Mohammad Ali Moni. "Attribute Driven Temporal Active Online Community Search", **IEEE Access**, v.9, pp. 93976-93989, 2021, (**Journal Rank: Q1, SCI, IF: 3.745**). [URL]
- (e) **Badhan Chandra Das** and Md. Musfique Anwar, "Predicting Election Outcome from Social Media Data", in International Journal on Natural Language Computing (IJNLC), v.9, n.1, issue February 2020. [URL]
- (f) **Badhan Chandra Das**, Md. Musfique Anwar, Iqbal H. Sarker. "Location-based Temporal Sentiment Analysis to Predict Election Outcome.", International Journal of Data Science and Analytics (JDSA) – Springer Nature. [Under Review].

### 2. Conference Papers:

- (a) **Badhan Chandra Das**, M. Hadi Amini, and Yanzhao Wu. "Privacy Risks Analysis and Mitigation in Federated Learning for Medical Images" in International Conference on Bioinformatics and Biomedicine (2023), Acceptance Rate: 19.7%.
- (b) Md. Mahbubur Rahman, **Badhan Chandra Das**, Al Amin Biswas, and Md. Musfique Anwar. "Predicting Participants' Performance in Programming Contests using Deep Learning Techniques." International Conference on Hybrid Intelligent Systems (HIS-2022). (Springer-LNNS indexed).
- (c) Rafsun Jani, Md. Shariful Islam Shanto, **Badhan Chandra Das**, and Khan Md. Hasib. "Machine learning-based Social Media News Popularity Prediction." International Conference on Hybrid Intelligent Systems (HIS-2022). (Springer-LNNS indexed),

- (d) Md. Jubier Ali, **Badhan Chandra Das**, Suman Saha, Al Amin Biswas and Partha Chakraborty. "A Comparative Study of Machine Learning Algorithms to Detect Cardiovascular Disease with Feature Selection Method", International Conference on Machine Intelligence and Data Science Application (MIDAS-2021). (Springer-LNCS indexed).
- (e) **Badhan Chandra Das**, Md Musfique Anwar, Iqbal H. Sarker. "Reducing Social Media Users' Biases to Predict the Outcome of Australian Federal Election 2019", 7<sup>th</sup> IEEE Asia-Pacific Conference on Computer Science and Data Engineering (CSDE-2020).
- (f) **Badhan Chandra Das**, Md. Musfique Anwar, "Attribute Driven Temporal Local Active Online Community Detection", 12<sup>th</sup> IEEE/ACM International Conference on Advances in Social Network Analysis and Mining (ASONAM 2020), Acceptance Rate: 19.2%.
- (g) **Badhan Chandra Das**, Md. Musfique Anwar, Md. Al-Amin Bhuiyan. "Query Oriented Temporal Active Community Search", 9<sup>th</sup> International Conference on Complex Networks and their Applications-2020.
- (h) **Badhan Chandra Das**, Md Shoaib Ahmed and Md Musfique Anwar, "Query-Oriented Active Community Search", Proceedings of International Joint Conference on Computational Intelligence, pp. 495-505, 2020, Springer.

## Research Interests

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- o Privacy Preserving Machine Learning and Their Application in Healthcare.
- o Deep Learning and Artificial Intelligence.
- o Language Modeling.
- o Federated Learning.
- o Social Network Analysis and Data Science.

## Projects

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- o Language Modeling.
- o Machine Learning and Deep Learning for Healthcare Application.
- o Privacy Preserving Federated Learning for Medical Images.
- o Social Network Analysis.

## Technical and Programming Skills

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- o **Programming Language:** Python, C, C++, Java, C#, R.
- o **Data Science and Visualization:** Pytorch, Pandas, NumPy, Scikit-learn, Networkx, Matplotlib and Seaborn.
- o **Database:** Oracle SQL Server, MySQL.
- o **Technical Writing and Presentation:** LATEX, Microsoft Office.
- o **Web Base:** HTML, CSS, Javascript, Django.
- o **Online Course:** Applied Data Science with Python Specialization from *coursera.org* offered by University of Michigan.

## Extracurricular Activities

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1. Worked at Jahangirnagar University Computer Club as General Secretary from August 2017 to August 2019.
2. Anchored and hosted several events where around 70-80 individuals participated.
3. Took workshop on 'Assembling and Disassembling of The Components of Computer Hardware'