

DR. PRIYAKSHI MAHANTA

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Jorhat, Assam 785001

Research-oriented, dedicated and reliable professional looking to utilize my teaching and research skills to support Computer science students during the upcoming academic year.

ACADEMIC QUALIFICATION

| Exam Passed | Institution/University | Board | Year of Passing |
|-------------------------------|---|--|-----------------|
| SLET NE (Computer Science) | | State Level Eligibility Test Commission(N.E. Region) | March 2023 |
| PhD | Computer Science and Engineering, Tezpur University | Tezpur University | April 2017 |
| MCA | Computer Science and Engineering, Tezpur University | Tezpur University | June 2010 |
| BCA | Jagganath Barooah College, Jorhat | Dibrugarh University | July 2007 |
| HS (Science) | Jagganath Barooah College, Jorhat | AHSEC | June 2004 |
| HSLC | Jonaki Sangha Vidyalaya, Jorhat | SEBA | July 2001 |

HONORS AND AWARDS

Title of Award

Best Paper Award on Ist International Conference on Accessibility to Digital world 2016 for the paper “A gene ontology based approach to protein complex detection”

Title of Fellowship

NEC Merit Fellowship (PG) 2007

BSR Fellowship of UGC (Ph.d) 2013

RESEARCH EXPERIENCE

Project: Beyond clustering gene expression data analysis using mining Techniques
PI and CoPI : Name

- Prof. Dhruba Kumar Bhattacharyya, Dept of Computer Science and Engineering, Tezpur University
- Prof. Ashish Ghosh, Machine Intelligence Unit, Indian Statistical Institute

Institution/Company/Organization,

2011 to 2013

Department of Science & Technology, Government of India collaboration with Indian Statistical Institute, kolkata

Position

- Research Associate

TEACHING EXPERIENCE

Jorhat Engineering College, Jorhat

Assistant Professor, Department of MCA, Jorhat engineering College serving from to July 29th 2024 to till date.

- Taught B. Tech Computer science and Engineering ,an undergraduate course averaging 60 students per semester, covering the following topics: **Programming for Problem solving**
- Taught Master of Computer Application (MCA), an postgraduate course averaging 30 students per semester, covering the following topics: **Data Science, Python programming**

Dibrugarh University

Assistant Professor, Centre for Computer Science and Applications, Dibrugarh University serving from September 2014 to July 28th 2024.

- Taught Bachelor of Computer Applications (BCA), an undergraduate course averaging 60 students per semester, covering the following topics: **Database Management System , Formal Language and Automata**
- Taught Master of Computer Application (MCA), an postgraduate course averaging 30 students per semester, covering the following topics: Data Mining , Operating Systems
- Taught Post Graduate Diploma in Computer Applications (PGDCA), an undergraduate course averaging 30 students per semester, covering the topic: Data Communication and Computer Network
- Taught Doctor of Philosophy (Phd). Course Work covering the topic Data Mining and data Warehousing
- Served as a paper setter for MCA(CBCS), MCA(NCBCS), PGDCA, BCA (CBCS),BCA (NCBCS), B.A/BSC(computer skills), BCA(DODL)
- Served as a external examiner in colleges of Dibrugarh University and Other Universities
- Revised the syllabus to meet accreditation standards
- Coordinated labs with a team of one laboratory assistant

Name of University, Tezpur University

Autumn 2010 to Autumn 2013

Teaching Assistant, Department of Computer Science and Engineering

- MTech (Course Data Mining), MCA and B Tech(Database Management System)

PUBLICATIONS

Journal Publications

- Sadeghi, Z., Alizadehsani, R., CIFCI, M. A., Kausar, S., Rehman, R., Mahanta, P., ... & Pardalos, P. M. (2024). A review of Explainable Artificial Intelligence in healthcare. *Computers and Electrical Engineering*, 118, 109370.
- Baruah, V. J., Neog Bora, P., Sarmah, B., Mahanta, P., Sarmah, A., Moretti, S. ... & Borkotokey, S. (2022). Game-theoretic link relevance indexing on genome-wide expression dataset identifies putative salient genes with potential etiological and diapeutics role in colorectal cancer. *Scientific Reports*, 12(1), 13409.
- SARMAH, ANKUMON, et al. "A NOVEL APPROACH FOR AUTOMATIC SPEAKER IDENTIFICATION OF ASSAMESE LANGUAGE USING COSINE SIMILARITY AND ABSOLUTE MFCC FEATURE MATRIX." *Journal of Theoretical and Applied Information Technology* 100.21 (2022).
- REHMAN, R., BORDOLOI, K., DUTTA, K., BORAH, N., & MAHANTA, P. (2020). FEATURE SELECTION AND CLASSIFICATION OF SPEECH DATASET FOR GENDER IDENTIFICATION: A MACHINE LEARNING APPROACH. *Journal of Theoretical and Applied Information Technology*, 98(22).
- Neog Bora, P., Baruah, V. J., Borkotokey, S., Gogoi, L., Mahanta, P., Sarmah, A., ... & Moretti, S. (2020). Identifying the Salient Genes in Microarray Data: A Novel Game Theoretic Model for the Co-Expression Network. *Diagnostics*, 10(8), 586.
- Mr. Pranjal Kumar Bora, Dr. Arun Kumar Baruah, Dr. Priyakshi Mahanta. (2020). Property Based Amino Acid Network Analysis. *International Journal of Advanced Science and Technology*, 29(05), 9023-9036.
- Mahanta, P., Choudhury, G. A., & Dey, T. (2018). An effective method to estimate missing value for heterogonous dataset. *International Journal of Knowledge Based Computer Systems*, 6(2), 8-22.
- Deb, S., Mahanta, P., Bhattacharyya, D. K., & Dutta, M. A. (2018). Subspace module extraction from MI-based co-expression network. *International Journal of Bioinformatics Research and Applications*, 14(3), 207-234.
- Mahanta, P., Bhattacharyya, D. K., & Ghosh, A. (2015). MIPCE: An MI-based protein complex extraction technique. *Journal of biosciences*, 40(4), 701-708.
- Mahanta, P., Ahmed, H. A., Bhattacharyya, D. K., & Ghosh, A. (2014). FUMET: A fuzzy network module extraction technique for gene expression data. *Journal of biosciences*, 39(3), 351-364.
- Ahmed, H. A., Mahanta, P., Bhattacharyya, D. K., & Kalita, J. K. (2014). Shifting-and-scaling correlation based biclustering algorithm. *IEEE/ACM transactions on computational biology and bioinformatics*, 11(6), 1239-1252.

- Ahmed, H. A., Mahanta, P., Bhattacharyya, D. K., & Kalita, J. K. (2012). Module extraction from subspace co-expression networks. *Network Modeling Analysis in Health Informatics and Bioinformatics*, 1(4), 183-195.
- Mahanta, P., Ahmed, H. A., Bhattacharyya, D. K., & Kalita, J. K. (2012). An effective method for network module extraction from microarray data. *BMC bioinformatics*, 13(13), 1-11.
- Ahmed, H. A., Mahanta, P., Bhattacharyya, D. K., & Kalita, J. K. (2012). Autotuned Multilevel Clustering of Gene Expression Data. *American Journal of Bioinformatics Research*, 2(5), 68-78.

Conference Papers

- Sarmah, A., Rehman, R., Mahanta, P., & Dutta, K. (2023, March). Identification and Analysis of Assamese vowel speech signal using Formant Feature-Fusion and Feed-Forward Neural Network Model. In 2023 4th International Conference on Computing and Communication Systems (I3CS) (pp. 1-7). IEEE.
- Dutta, K., Rehman, R., Mahanta, P., & Sarmah, A. (2022, November). A Study on Feature Selection for Gender Detection in Speech Processing for Assamese Language. In *Information, Communication and Computing Technology: 7th International Conference, ICICCT 2022, New Delhi, India, July 16, 2022, Revised Selected Papers* (pp. 73-82). Cham: Springer Nature Switzerland.
- Mahanta, P., Devi, N., Bhattacharyya, D. K., & Kalita, J. K. (2016, December). A Gene Ontology based approach to protein complex detection. In 2016 International Conference on Accessibility to Digital World (ICADW) (pp. 129-134). IEEE.
- Mahanta, P., Bhattacharyya, D. K., & Ghosh, A. (2016, March). PDCComp: An Effective PPI complex Finding Method. In *Proceedings of the Second International Conference on Information and Communication Technology for Competitive Strategies* (pp. 1-6).
- Mahanta, P., Ahmed, H. A., Kalita, J. K., & Bhattacharyya, D. K. (2012, October). Discretization in gene expression data analysis: a selected survey. In *Proceedings of the Second International Conference on Computational Science, Engineering and Information Technology* (pp. 69-75).
- Ahmed, H. A., Mahanta, P., & Bhattacharyya, D. K. (2012, August). Finding gene coherent patterns using PATSUB+. In *Proceedings of the International Conference on Advances in Computing, Communications and Informatics* (pp. 38-44).

Book Chapter

1. Priyakshi Mahanta, (2022), “Pathway analysis of genes extracted from weighted gene co-expression network module”, *Multidisciplinary approach in Research Vol-1 (ISBN: 978-91-987582-5-2)*
2. Mahanta, P., Bhattacharyya, D. K., & Ghosh, A., (2013). “A subspace module extraction technique for gene expression data.” *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* Volume 8251 LNCS, Pages 635 – 640, (ISBN 978-364245061-7)

Patents:

1. **"Smart Speaker for Playback Singing"**, D.No. 390042-001, Cbr Number 208581, Journal No 39/2023 'Published on: 29/09/2023, **The Patent Office, Government of India.**
2. **"IOT DEVICE FOR HUMAN VOICE RECORDING, FREQUENCY REPLICATION AND IDENTIFICATION BASED ON NEURAL NETWORK AND FORMANT FREQUENCY"**, D.No. 394742-001, Cbr Number 211307, Journal No 46/2023 and Journal Published on 17/11/2023, **The Patent Office, Government of India.**
3. **"IOT BASED ALCOHOL BREATH DETECTION DEVICE USING SMART SENSING AND DEEP NEURAL NETWORK"**, D.No. 420968-001, Cbr Number- 210929, Journal No. 34/2024, Journal Published on 23/08/2024. **The Patent Office, Government of India.**

ADMINISTRATIVE ASSIGNMENTS

- Assistant Zonal Officer for PGDCA examination 2015
- Assistant Zonal Officer for PGDCA examination 2019 under Annual mode
- Warden, Joymoti Chatri Nivas(JCN), PadmaKumari Gohain Women's Hostel Dibrugarh University from 2/02/2020 to 1/01/2024.
- Member, Hostel Management committee, Dibrugarh University

LANGUAGES

Assamese

English

Hindi

COMPUTER SKILLS

Programming: C, C++, Java, VB.NET, JavaScript, HTML, PHP, MATLAB, R, Python

Platforms: windows, linux



Place:

Date:

Signature