Profile

1. Personal Details:

Antara Mahanta Barua
Assistant Professor in Electronics
Krishna Kanta Handiqui State Open University
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Profile Summary: Antara Mahanta Barua is associated with Krishna Kanta Handiqui State Open University since 2008. She is Assistant Professor in the GPD School of Interdisciplinary and Vocational Studies at KKHSOU, Guwahati. She deals in developing Self Learning Materials and Audio Video contents on various skill-based courses run under this School. She is also engaged in developing Science programme under the HCB School of Science and Technology. She is co-coordinator of two MOOCs on Domestic Equipment Maintenance and on Electricity and Electrical Wiring in the SWAYAM platform and has also contributed in developing two modules in other SWAYAM MOOC course. In her research work, she aimed at prediction of electrical consumer profile of residential consumers using smart meter data and proposed a predictive model based on machine learning algorithm for mid-term prediction of power consumption. Dr. Barua's current research interests include Electrical networks, Smart grid, Renewable energy, Machine learning and Online/Distance Education.

Field of Specialisation: Signal Processing, Communication System, Power System.

Language Proficiency: Assamese, English, Hindi and Bengali

2. Educational Qualifications:
- Ph.D form Assam Science and Technology University, 2021
- UGC-NET, 2013
- M.Tech in Electronics and Communication Engineering from Gauhati University, 2012
- M.Sc. in Electronics and Communication Technology from Gauhati University, 2002

3. Teaching Experience: 16 years

4. International Exposure:

- Received AAOU Conference Fellowship 2024 in 37th Annual Conference of Asian Association of Open Universities (AAOU2024) held from 15th to 17th October, 2024 at Islamabad, Pakistan.

- Presented a research paper entitled "*Smart Metering Deployment Scenarios in India and Implementation Using RF Mesh Network*" in the International Conference on "Smart Grid and Smart Cities", held in **Nanyang Technological University**, Singapore, from 23 to 26 July, 2017.

5. Journal Publications:

- Barua, A. and Bharali, S. S. "**Gamification and its challenges in e-learning: A case study of computer science learners in KKHSOU**," Asian Association of Open Universities Journal, vol. 18, no. 3, pp. 233–245, 2023, doi: 10.1108/AAOUJ-01-2023-0001.
  Indexing- Scopus
- Barua, A. and Goswami, P. K.: "**A Survey on Electrical Power Consumption Prediction Techniques**" International Journal of Engineering Research and Technology (IJERT), ISSN 0974-3154, Vol. 13, no. 10 (2020) pp.2568-2575
  Indexing- Scopus
- Barua, A. and Goswami, P. K.: "**Analysis of Household Electricity Consumption Using Smart Meter Data**" International Research Journal of Engineering and Technology (IRJET), Volume: 07 Issue: 08, Aug 2020.
  Indexing- Google Scholar
- Barua, A.: "Next Generation IP Based Metering for Monitoring and Control of Power Consumption", Advanced Research in Electrical and Electronic Engineering, 3(5), p 418-421. 2016 (ISSN:2349-5804)
  Indexing- Google Scholar
- Barua, A. and Sarma, K. K.: "Online Resource and ICT- Aided Virtual Laboratory Setup", International Journal of Computer Applications, Vol. 52- No.6, Aug.2012, p (44-48)
  Indexing- Google Scholar

6. Chapters/Research Papers in Books:

- "An Overview of Smart Metering System in Smart Grid". 2019/ P-15-20. Published on behalf of 121th OP at UGC, HRDC, Gauhati University. ISBN-978-93-88593-94-6.

7. Research papers, published in Conference Proceedings:

1. Barua, A. and Goswami, P. K.: "Smart Metering Deployment Scenarios in India and Implementation Using RF Mesh Network", *Proc. IEEE International Conference on Smart Grid and Smart Cities (ICSGSC)*, 243-247, 2017, ISBN: 978-1-5386-0503-5.
2. Barua, A.: "Scope of green energy in India and available resources in the North Eastern Region," in Proceedings of the National Seminar on Green Energy: Prospects and Challenges, Assam Science and Technology University, Guwahati, India, Apr. 26–27, 2016, pp. 61–66, ISBN: 978-93-83588-11-4.
3. Barua, A. and Sarma, K. K.: "ICT-enabled laboratory framework for remote access applications," in Proceedings of the International Conference in Electronics and Communication Engineering (ICECE-2012), IIMT Bhubaneswar, India, June 3, 2012, pp. 126–130, ISBN: 978-93-81693-91-9.
4. Barua, A. and Sarma, K.K: "ICT supported virtual laboratory for basic electronics and communication experiments," in Proceedings of the 1st International Conference on Innovations and Advancements in Information and Communication Technology, Gautam Buddha University, Greater Noida, India, Mar. 30–31, 2012, pp. 219–227, ISBN: 978-93-81583-34-0.

8. Working Paper:

1. Published a Working Paper on "Smart Metering System for Energy Conservation and its Implementation in Assam", Published by KKHSOU, January 2018.

9. Research projects (minor/major)

1. Minor Research Project entitled "*Identifying Areas for Development of Need Based Vocational Programme Through ODL: A Case Study of Dibrugarh and Bongaigaon Districts of Assam*", funded by KKHSOU of Rs. 1,10,000/- (Rupees One lakh ten thousand only).
   Year: 2013, **Duration:** 1 year, **Status**: Completed
2. Minor Research Project entitled "*A Study on the Estimation of Financial Benefit from Grid-Connected Solar Rooftop Installations in Educational Institutions*" funded by KKHSOU of Rs. 1,20,000/- (Rupees One lakh twenty thousand only).
   Year: 2025, **Duration:** 1 year, **Status**: Ongoing

10. Seminars/Conferences

attended: National:

1. Participated in "Gender Sensitisation in India's North East: Issues and Challenges." KKHOU in collaboration with National Women's Commission. March 5-6, 2020.
2. Presented a paper entitled "Scope of Green Energy Sources in India and Availability of Resources in the NE Region" in the National Seminar on "Green Energy Prospects and Challenges" Assam Science and Technology University, Guwahati on 26-27 April, 2016.
3. Participated in national conference on "Social Sector Development and Governance Issues in the North East", KKHSOU, Guwahati, 28-29 November, 2015.

International:

1. Presented a paper titled "A Web Based Remote Laboratory Framework for Learners in Critical Time" in two days International Online Conference on "Teaching-Learning in the Time of Pandemic: Role of Online Learning" organized by KKHSOU in collaboration with CEMCA held on 21-22 April, 2020.
2. Participated in International Conference on "Developmental Interventions and Open Learning for Empowering and Transforming Society" KKHSOU, 13-15 December, 2017.
3. Presented a paper entitled *"Next Generation IP Based Metering for Monitoring and Control of Power Consumption"*- published in the International Conference on "Innovative Research in Applied Physics, Material Sciences, Instrumentation, Electronics, Communication, Electrical, Power Control, Computer Science and Information Technology" (TECHNOVA-2016), Gauhati University on 22-23 December, 2016.
4. Presented a paper entitled "ICT- Enabled Laboratory Framework for Remote Access Applications" ICECE, 2012, Guwahati, 3 June, 2012.

11. **Workshops/Training Programmes attended:**

1. Participated in the Three-Day National Seminar on "Philosophy, Science and Ethics: Indian and Western Perspectives", organised by the Discipline of Philosophy, KKHSOU from 12-14, November, 2024.
2. Participating in the National Level One Week Online GIS Training Workshop from 10-15, August, 2020 organized by Department of Geography in collaboration with Pragjyotish College Geographical Society (PCGS), Pragjyotish College, Guwahati, Assam, India.
3. Participated in the Three Day Online Workshop on "Capacity Building of Academic Counsellors" organized by KKHSOU in collaboration with CEMCA held from 16-18 June, 2020.
4. Participated in the Four Day Online Workshop on Capacity Building of Teaching and Academic Staff of KKHSOU ON "Development of MOOCs for ODL Learners" organized by CEMCA from 22nd to 25th June,2020.
5. One day workshop on "Academic Reforms and Art of doing Research" organised by Assam Science and Technology University, Guwahati, 6 November, 2019.
6. Training Programme on Organisation wise Quality Management organised by KKHSOU on 1st November, 2019.
7. Workshop on Choice based Credit System organised by KKHSOU from 28-29 December, 2018.
8. Workshop on Faculty Development organised by KKHSOU, Guwahati from 18-19 November, 2018.
9. One day workshop on "Development of MOOCs using Open Educational Resource, organised by K.K. Handiqui State Open University, at Guwahati on 4 May, 2017.
10. A two days workshop on *"Smart Grid and Internet of Things",* organised by Power System Division, Central Power Research Institute (CPRI), Govt. of India Society, Ministry of Power at Bengaluru, Karnataka on 2-3February, 2017.
11. SLM Writing and Research Methodology, organised by KKH State Open University, Guwahati, March, 2013.
12. ISTE Workshop IIT, Bombay, National Mission on Education through ICT (MHRD) 28 June to 8 July, 2011
13. Workshop on "Web 2.0 Tools in Distance Education for Faculty of State Open University" IGNOU, New Delhi, 15-19 June, 2009
14. Workshop on Faculty Development Programme on Entrepreneurship, IIE, Guwahati, Ministry of Small-Scale Industries, Govt. of India, 1-12 January, 2007.

12. **Professional Programmes Completed:**

- Completed 5 Day FDP on Innovation and Entrepreneurship, held at Assam down town University, Guwahati, organised by All India Council for Technical Education (AlCTE) and Ministry of Education's Innovation Cell (MIC) from 22-26 April 2025.
- Completed One Week National Level Online FDP on "Outcome Based Education and Application of Generative AI in Teaching and Research", organised jointly by the IQAC of Vasireddy Venkatadri Institute of Technology, Guntur, Andhra Pradesh and the IQAC of Siddaganga Institute of Technology, Tumkur, Karnataka in association with ipsr solutions limited from 24–31 July 2024.
- Completed the NEP 2020 Orientation & Sensitization Programme under Malaviya Mission Teacher Training Programme (MM-TTP) of UGC Organized by UGC-Malaviya Mission Teacher Training Centre, National Institute of Educational Planning and Administration, New Delhi, from 03-12 January 2024.
- Completed the MOOC on Teaching Science with Technology offered by the University of Abuja, Nigeria from 13 May to 14 June 2024.
- Completed Online Refresher Course on *Information and Communication Technology* organized by the Human Resource Development Centre, University of Hyderabad from March 6-18, 2023.
- Completed One Week FDP on "*Academic Research Writing*" organised by Teaching Learning Centre of Ramanujan College, University of Delhi from 16-22 July, 2022.
- Completed the UGC-sponsored online Refresher Course on *"Machine Learning and Data Science"* conducted by HRDC, Gauhati University from 15 to 28 February 2021.
- Completed the Massive Open Online Course on "Introduction to Technology-Enabled Learning" offered jointly by Commonwealth of Learning and Athabasca University, Canada from 21 June to 25 July, 2020.
- Completed the Massive Open Online Course on "Academic Counselling for ODL Learners" offered jointly by Commonwealth of Learning and Odisha State Open University from 2 November to 3 December, 2020.
- Completed one-week Faculty Development Programme on Research Methodology organized by Kumar Bhaskar Varma Sanskrit and Ancient Studies University, Nalbari and Barbhag College, Nalbari

held on 24-30 June, 2020.

- Completed UGC-sponsored Orientation Programme (OP-121) held from 26 August- 15 September, 2019 at UGC-HRD Centre, Gauhati University.
- Completed a Faculty Development Programme on "Experential Learning: Nai Talim and Rural Community Engagement" organized by K. K. Handiqui State Open University from 2-6 July, 2019.
- DOEACC "A" Level Advanced Diploma-2009

13. **Administrative Experiences:**

- University Nodal Officer of UGC E-Samadhaan portal, April 2024 onwards
- University Nodal Officer for SWAYAM MOOC, 2024 onwards
- Nodal Officer of PG Portal of Public Grievance, Dept. of HE, Gov. of India, April 2024 onwards
- Served as a member of various university committees.
- Served as OSD to Registrar from 1 February, 2018 to 31 August, 2019.

14. **Membership in National/International Forum/Association:**

- IEEE membership

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