CURRICULUM VITAE

1. **Name** AnupamGhosh

2. Present Designation Professor
Department of Computer Science & Engineering
Netaji Subhash Engineering College
Head, Artificial Intelligence & Machine Learning

3.a) Home Address: Subudhipur Middle Road (Near Krishna Cinema),
P. O.: Baruipur, 24 Parganas (South),
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3.b) web link: **https://www.nsec.ac.in/fps/faculty.php?id=138**

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https://www.linkedin.com/in/anupam-ghosh-1504273b/

https://scholar.google.com/citations?user=uejpl3kAAAAJ&hl=en

4. a) Sex: Male
b) DOB: 14.12.1978

5. Email: **anupam.ghosh@rediffmail.com**,**anupam.ghosh@nsec.ac.in**

6. Teaching Experience: **23** years

7. Research Area: Soft Computing, Machine Learning, Deep Neural networks, Image Processing, Bio-medical imaging, Criminology, and Computational Biology

8. No. of Publications: **131** International Publications (including 35 SCI and 8 ESCI Indexed Journal Papers)

9. Professional Activity: 1. Fellow of Nikhil Bharat Shiksha Parisad
2. Senior Member of IEEE (id: 93898913**)**
3. IEEE society advisors: Computer Society, Computational Intelligence Society, NSEC

10.Academic Qualifications:

Qualification	Board/University	Year
Ph. D. in Engineering Title of the thesis: "Soft Computing Methodologies for Identification of Some Possible Genes Mediating the Development of a Disease: Analysis of Microarray Gene Expression Profiles"	Jadavpur University	**2013** **(Submission of thesis: 26.12.2012)**
M. Tech. in Computer Science and Engineering)	University of Calcutta	2004
M.Sc. in Computer and Information Science)	University of Calcutta	2002
B. Sc. (Honours) in Computer Science	University of Calcutta	2000
Higher Secondary (Class XII)	West Bengal Council of Higher Secondary Examination	1997
Madhyamik (Class X)	West Bengal Board of Secondary Education	1995

11. Working Experience:

From	To	Position held	Organization/Institute	Department
1st June, 2018	Till Date	Professor (in PB-4: Rs. 37,400/--67,000/-) with AGP Rs. 10000/-)	NetajiSubhash Engineering College	Computer Science and Engineering
1st January, 2015	31st March, 2019	Associate Professor (in PB-4: Rs. 37,400/--67,000/-) with AGP Rs. 9000/-)	NetajiSubhash Engineering College	Computer Science and Engineering
1st September, 2011	31st December, 2014	Assistant Professor (in PB-3: Rs. 15,600/--39,100/-) with AGP Rs. 8000/-)	NetajiSubhash Engineering College	Computer Science and Engineering
18th October, 2007	31st August, 2011	Assistant Professor (in PB-3: Rs. 15,600/--39,100/-) with AGP Rs. 7000/-)	NetajiSubhash Engineering College	Computer Science and Engineering
1st August, 2004	17th October, 2007	Lecturer (Scale: Rs. 8000-275-13500 (5th pay structure)	NetajiSubhash Engineering College	Computer Science and Engineering
18th October,	31st July, 2004	Lecturer	NetajiSubhash Engineering College	Computer Science and Engineering

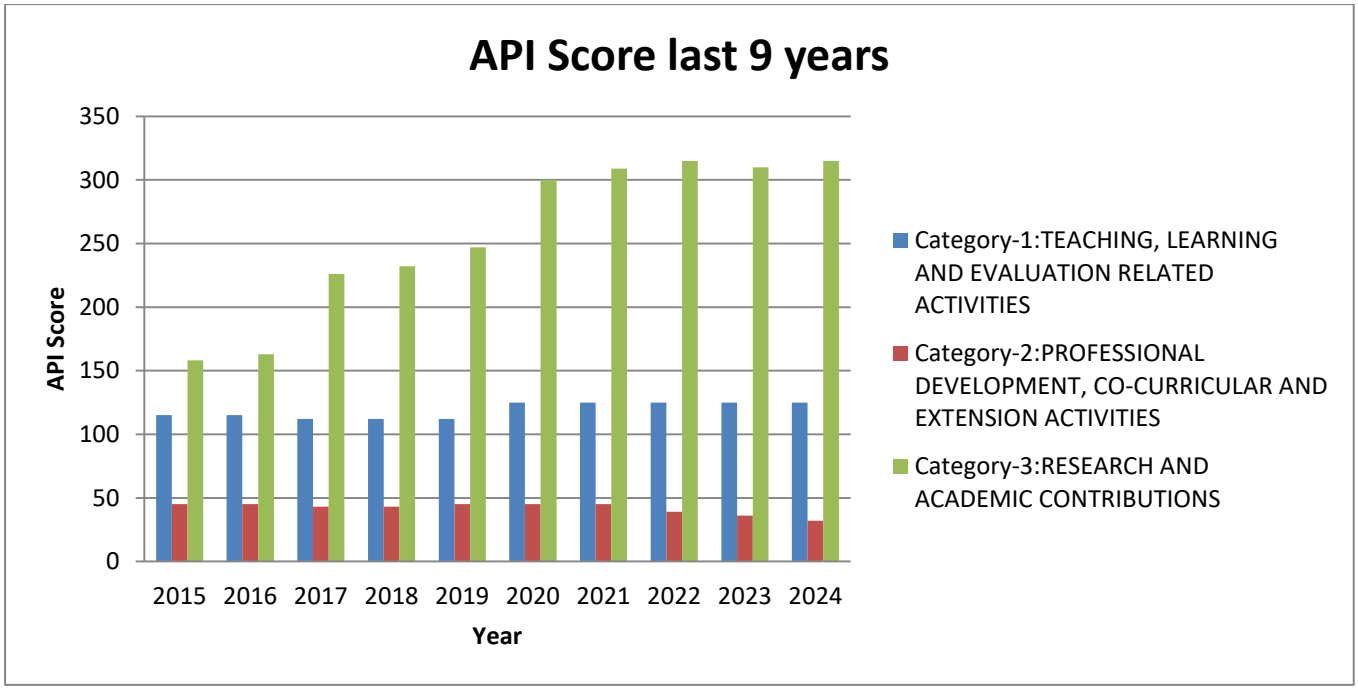
2002				
2012	Till date	Guest Faculty	University of Calcutta	M. Tech. (Computer Science and Engineering)
2009	Till Date	Guest Faculty	University of Calcutta	M. Tech. (Information Technology)
2009	Till Date	Guest Faculty	University of Calcutta	M. C. A.
2013	2014	Guest Faculty	JadavpurUniversity	B. E. (Information Technology)
2014	Till Date	Guest Faculty	University of Calcutta	M.Sc. (Computer Sc.)
2014	Till Date	Guest Faculty	University of Calcutta	B.TECH (Computer Sc. &Engg.)
1st July, 2017	31st Dec, 2017	Adjunct Faculty	NIPER (Govt of India)	Ph.D
1st Feb, 2018	Till date	Adjunct Faculty	NIPER (Govt of India)	MS

Specialization: 1. Data Analysis with R (Duke University)
2. Data Mining (Illinois University)

Certification: 1. Introduction to Probability and Data with R (Duke University)
2. Inferential Statistics (Duke University)
3. Linear Regression and Modeling (Duke University)
4. Introduction to Machine Learning (Duke University)

12. ACADEMIC PERFORMANCE INDICATORS (API)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Category-1:TEACHING, LEARNING AND EVALUATION RELATED ACTIVITIES	**115**	**115**	**112**	**112**	**112**	**125**	**125**	**125**	**125**	**125**
Category-2:PROFESSIONAL DEVELOPMENT, CO-CURRICULAR AND EXTENSION ACTIVITIES	**45**	**45**	**43**	**43**	**45**	**45**	**45**	**39**	**36**	**32**
Category-3:RESEARCH AND ACADEMIC CONTRIBUTIONS	**158**	**163**	**226**	**232**	**247**	**300**	**309**	**315**	**310**	**315**



13. Research Activities:

Components	Jun, 2025	In last three years
Number of Publications	129	101
Number of SCI/ESCI indexed Journal Papers	43	33
International Conference Papers	47	36
Book Chapters	35	27
No. of Citations	837	600
No. of Books	6	6
Student Publications	38	31
Patent/Copyright	2 granted, 1 (Filed)	2 granted, 1 (Filed)

Faculty/ Scholar	PhD supervising status	Area of Research
6	**5 registered;** **5 Awarded;** **1 Submitted;**	**Bioinformatics, Machine Learning, Soft Computing, Image Processing, Data mining, Pattern Recognition, Artificial Neural Network**

- Guided thesis title: "**Computational Methods to Analyze Microarray Gene Expression Data"; Reg: 3881/Ph.D (Tech) Proceed/ 2014; Awarded in 2021; Research Scholar: Sujay Saha, University of Calcutta**

- Guided thesis title**: "Gene Selection and Gene – Gene Interaction on Expression Data Sets using Machine Learning Algorithms"; Reg. No. : PhD/Tech/CSEIT076/2018; Awarded, June 2023; Research Scholar: Swarup Ghosh, MAKAUT**

- Guided thesis title: **BIOMARKER IDENTIFICATION FOR CANCER DATA SETS USING MACHINE LEARNING APPROACH ; Reg: 1001450015 awarded 2023; Research Scholar: Mr. Partho Mullick; Techno India University**

- Guided thesis title**: A Framework for Efficient Sentiment Analysis and Its Online Deployment; Reg no: 190090017127; Research Scholar: Ms. Mousumi Bhattacharyya; Awarded 2024; Sister Nivedita University**

- Guided thesis title: **Predictive Framework on Large Heterogeneous Crime Dataset using Machine Learning Approaches; Reg. No. : Ph.D./Tech/CSE100/2019; Awarded, August 2025; Research Scholar: Anupam Mukherjee, MAKAUT**

International Research Collaboration: Deakin University, Australlia;

Consultancy Project:

- **The Hong Kong University of Science and Technology; QoS#44**

Fund: INR 5.5 lakhs (50000 HKD); Duration: 6 months

Contract for Services 服務合約 Original

香港科技大學 THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY
香港九龍清水灣 Clear Water Bay, Kowloon, Hong Kong
www.ust.hk
Tel 電話: (852) 2358 6406 Fax 傳真:(852) 2358 1290

PO ID 採購單號: HKUST-P100297613	Date 日期: 14-JUL-2025
Payment Term 付款方法: Net 30	Due Date 交貨期限: 01-DEC-2025
Trade Terms 付運條款: Delivered HKUST Campus	

PO ID must be quoted on all correspondences and original invoice should be sent to 所有文件必須註明採購單號,並將正本發票寄往 : Finance Office, HKUST, Clear Water Bay, Kowloon, Hong Kong

To 致: 1003029606
Anupam GHOSH

Subuddhipur Middle Road
PO: Baruipur, 24 PGS (South)
Kolkata:700144
West Bengal
India

Contact Person 聯絡人: Anupam GHOSH
Tel 電話: (091) 983/183-7936
Email 電郵: anupam.ghosh@rediffmail.com

Ship To 送貨地址:
Department of Ocean Science
Room 5007 via Lift 35/37, CYT Bldg
The Hong Kong University of Science & Technology
Clear Water Bay Kowloon
Hong Kong SAR, China

Contact Person/Tel 聯絡人及電話:
Prof Hongbin LIU
Yin Ki TAM / 2358 8402

REQ ID 申請編號: R100297613	Contract ID 合同編號: N.A.
Tender/Quote 投標/報價: TQY2500013	Buyer/Tel 採購員及電話: Yuki Lau / 23586380

Item 項目	Description 內容	Quantity 數量	Unit 單位	Unit Price 單價 HKD	Amount 金額 HKD
Schedule 1 : Services					
1-1	Individual consultancy fee for providing modelling service in the project " Identifying the Seagrass Conservation and Restoration Priorities in Hong Kong in relation to Anthropogenic Pressure" funded by Marine Conservation Enhancement Fund. Consultancy Period:01/07/2025 - 01/12/2025 1. Outcomes of the linear and nonlinear modelling based on the available primary and secondary data on the seagrasses of Hong Kong. 2. Outcomes of the AI and ML based modelling, like Random Forest (RF), Gradient Boosting (GB) and XG Boosting based on the available data of seagrasses attributes and environmental variables in Hong Kong in order to identify seagrass conservation and restoration priorities. 3. Outcomes of the ensemble models and deep learning models individually and to support spatial modelling to assess model performance, accuracy assessments, and decision making.	1.00	job	50,000.00	50,000.00

Total 總額: HKD 50,000.00

Research Project:

1. Primary Investigator/Supervisor "Machine Learning in Bioinformatics" by UGC at University of Calcutta; Scheme: Rajib Gandhi National Fellowship program (UGC)
   Fund: 15 lakhs (including scholar's salary)
   Duration: 2015 - 2020

2. Investigator of a two-year joint research project with Bengal Engineering and ScienceUniversity (BESU) under Technical Quality Improvement Program (TEQIP) in the field of Bioinformatics -(Title: Development of an efficient bioinformatics tool for gene expression data analysis.
   Fund: 8 lakhs
   Duration: 2006-2008

Recognition as PhD supervisor:

a) Working as a joint PhD supervisor in the Department of Computer Science & Engineering, University of Calcutta

b) Working as a joint PhD supervisor in the Department of Computer Science & Engineering, Jadavpur University

c) Working as a joint PhD supervisor in A. K. Choudhury School of information Technology, University of Calcutta

Recognition as collaborative reseracher:

a) Worked in a Collaborative research with Indian Institute of Technology, Kharagpur from2014-2017.

b) Post-Ph.D research work with Indian Statistical Institute, Kolkata from 2013.

c) One research scholar registered in University of Calcutta under the Rajib Gandhi National Fellowship program (UGC)in the field of "Machine Learning in Bioinformatics"

Publication List: 63 Journal papers (*35 SCI/SCIE indexed journal papers and 8 ESCI indexed Journal Papers;) 44 conference papers and 35 book chapters; 6 books*

- **International Journal papers (2008)**

1. Rajat K. De and AnupamGhosh, "Linguistic recognition system for identification of some possible genes mediating the development of lung adenocarcinoma", ***Information Fusion***, vol. 10, pp. 260-269, 2008.(SCI/SCIE Impact Factor=17.56)DOI: https://10.1016/j.inffus.2008.11.007

2. Amit Paul, AnupamGhosh, and Jaya Sil, “Dimension reduction of gene expression data using redundancy removal algorithm-data compression approach”, International Journal of Bioinformatics, vol. 1, pp. 19-30, 2008.

- **International Journal papers (2009)**

3. Rajat K. De and AnupamGhosh, “Interval based fuzzy systems for identification of important genes from microarray gene expression data: Application to carcinogenic development”, ***Journal of Biomedical Informatics***, vol. 42, pp. 1022-1028, 2009. (SCI/SCIE,Impact Factor=8.0) DOI: https://doi.org/10.1016/j.jbi.2009.06.003

- **International Journal papers (2013)**

4. AnupamGhosh, Bibhas Chandra Dhara, and Rajat K. De, “Comparative analysis of cluster validity indices in identifying some possible genes mediating certain cancers”, ***Molecular Informatics***, vol. 32, pp. 347-354, 2013. (SCI/SCIE Impact Factor=3.35) DOI: https://doi.org/10.1002/minf.201200142

- **International Journal papers (2014)**

5. AnupamGhosh, Bibhas Chandra Dhara, and Rajat K. De, “Selection of genes mediating certain cancers, using neuro-fuzzy approach”, ***Neurocomputing***, vol. 133, pp. 122-140, 2014. (SCI/SCIE Impact Factor=5.71) DOI: https://doi.org/10.1016/j.neucom.2013.11.023

6. AnupamGhosh and Rajat K. De, “Development of a fuzzy entropy based method for detecting altered gene-gene interactions in carcinogenic state”, ***Journal of Intelligent & Fuzzy Systems***, vol. 26, pp. 2731–2746, 2014. (SCI/SCIE Impact Factor=1.71) DOI: https://10.3233/IFS-130942

- **International Journal papers (2015)**

7. AnupamGhosh and Rajat K. De, “Identification of certain cancer mediating genes using Gaussian Fuzzy Cluster Validity Index (GFI)”, ***Journal of Biosciences***, vol. 40, pp. 741-754, 2015.(SCI/SCIE Impact Factor=1.83); DOI: https://10.1007/s12038-015-9557-x

- **International Journal papers (2016)**

8. AnupamGhosh and Rajat K. De, “Fuzzy correlated association mining: Selecting altered associations among the genes, and some possible marker genes mediating

certain cancers", ***Applied Soft Computing***, vol. 38, pp. 587-605, 2016.(SCI/SCIE Impact Factor=8.26); DOI: https://doi.org/10.1016/j.asoc.2015.09.057

9. SujaySaha, DibyenduBikash Seal, AnupamGhosh, KashiNathDey, "A Novel Gene Ranking Method Using Wilcoxon Rank Sum Test and Genetic Algorithm", International Journal of Bioinformatics Research and Applications, vol. 12, pp. 263-278, 2016; DOI: https://10.1504/IJBRA.2016.078236

10. SujaySaha, AnupamGhosh, DibyenduBikash Seal and KashiNathDey, "An Improved Fuzzy Based Missing Value Estimation In DNA Microarray Validated By Gene Ranking", ***Advances in Fuzzy Systems***, 2016.; DOI: http://dx.doi.org/10.1155/2016/6134736

11. Sougata Sheet, AnupamGhosh and SudhinduBikashMandal,"Identification of influential biomarkers for human leukemia - An Artificial Neural Network approach", International Journal of Soft Computing & Artificial Intelligence, vol. 4, no. 1, pp: 27-31, 2016, DOI: http://IJSCAI-IRAJ-DOI-4618; ISSN: 2321-404X

- **International Journal papers (2017)**

12. PrithaKundu, Tania Chakraborty, OyndrilaMajumder, KritikaKumari, AnupamGhosh "QLEGAND –GA based hybrid machine learning algorithm for identifying the cancer mediating gene set", International Journal of Engineering, Technology, Science and Research, vol. 4, no. 1, pp. 183-191, 2017.

13. SubirHazra, Samir Kumar Sett, AnupamGhosh, AmlanChakraborty, "Identifying Cancer Mediating Biomarkers using Partition based Indexing Algorithm(PIA) – A Study on Lung Adenocarcinoma", International Journal of Innovations & Advancement in Computer Science, Vol 6, Issue 1, pp: 118-124,2017.

14. Rebeka Mukherjee, SeemantiGhosh, ApekshaPriya, ShikhaKumari, AnupamGhosh "Selection of Top k Biomarkers for Human Lung Adenocarcinoma using "FUGENE"- A Hybrid Machine Learning Approach", International Journal of Computer & Mathematical Sciences, Volume 6, Issue 5, Pp:179-185, May, 2017.

15. Nimisha Jain, Kumar Rahul, IpshitaKhamaru, Anish Kumar Jha, AnupamGhosh "Hand Written Digit Recognition using Convolutional Neural Network (CNN)", International Journal of Innovations & Advancement in Computer Science, Volume 6, Issue 5, Pp:260-266, May, 2017.

16. Jit Gupta, IndranilPradhan, AnupamGhosh, "Classification of Gene Expression Data using Gaussian Restricted Boltzmann Machine (GRBM) – An Application on Human Lung Adenocarcinoma data", International Journal on Recent and Innovation Trends in Computing and Communication, Volume 5, Issue 6, Pp:56-61, June, 2017.

17. S. Sheet, A. Ghosh, S. B. Mandal, “Selection of Gene Mediating Human Leukemia, using Deep Learning Approach”, Open J. Oncol. Hematol. vol. 2, no. 1, pp: 001-009, 2017.

- **International Journal papers (2018)**

18. Sougata Sheet, AnupamGhosh, SudhinduBikashMandal, “Cancer Mediating Genes Recognition using Multilayer Perceptron Model- An Application on Human Leukemia”, Advances in Science, Technology and Engineering Systems, vol. 3, no. 2, pp. 8-20, 2018. DOI: http://10.25046/aj030202

19. Swarup Kr Ghosh, AnupamGhosh, AmlanChakraborty, “VEA: Vessel extraction algorithm by active contour model and a novel wavelet analyzer for diabetic retinopathy detection***”, International Journal of Image and Graphics***, Vol: 18, No: 2, 2018, DOI: http://10.1142/S0219467818500080

20. ParthoMallick, Priyanka Seth &AnupamGhosh “Entropy-based fuzzy hybrid framework for gene prediction network – an application to identify and rank the biomarkers for human lung adenocarcinoma”, vol:41, issue: 1, ***International Journal of Computers and Applications***, VOL: 41, NO. 1, pp:62–77; 2018, DOI: https://doi.org/10.1080/1206212X.2018.1508865

21. RajkumarPatra, AnupamGhosh, “Influential biomarkers identification for human acute myeloid leukemia using backpropagation learning algorithm”,International Journal of Pure and Applied Mathematics, Volume 119 No. 12, pp:12911-12921, 2018.

- **International Journal papers (2019)**

22. Swarup Kr Ghosh, Biswajit Biswas and Anupam Ghosh; “SDCA: A Novel Stack Deep Convolutional Autoencoder - An Application on Retinal Image Denoising”; ***IET Image Processing***; 2019;13 (14):2778; DOI: http://10.1049/iet-ipr.2018.6582; (SCI-IF- 2.004);

23. BiswajitBiswas, Swarup Kr Ghosh and AnupamGhosh, “A Novel Automated Magnetic Resonance Image Segmentation Approach based on Elliptical Gamma Mixture Model for Breast Lumps Detection", ***International Journal of Imaging system and Technology***; Wiley,2019; pp: 1–18 DOI: http://10.1002/ima.22341.; (SCIE-IF- 2.00);

24. BiswajitBiswas, Swarup Kr Ghosh and AnupamGhosh, “A Novel CT Image Segmentation Algorithm Using PCNN and Sobolev Gradient Methods in GPU Frameworks”; ***Pattern Analysis and Applications***; Springer,23, 837–854; 2019; https://doi.org/10.1007/s10044-019-00837-9; (SCIE-IF- 2.58)

25. SujaySaha, AnupamGhosh, SaikatBandopadhyay, KashiNathDey "Missing Value Imputation In DNA Microarray Gene Expression Data: A Comparative Study Of An Improved Collaborative Filtering Method With Decision Tree Based Approach", ***International Journal of Computational Science and Engineering***, vol: 18, No: 2, 2019; DOI: https://10.1504/IJCSE.2019.097954

26. S.K Ghosh, S. Dey, A Ghosh, "Knowledge Generation Using Sentiment Classification Involving Machine Learning on E-Commerce", ***International Journal of Business Analytics (IJBAN):*** IGI Global, Vol: 6, pp: 74—90, 2019; DOI: https://10.4018/IJBAN.2019040104

27. Samir Kumar Sett, SubirHazra, AnupamGhosh; A Fuzzy Clustering algorithm influenced by Validity Indices (FCVI) for recognizing the differentially expressed cancer mediating genes; Meta Gene; 2019; DOI: https://doi.org/10.1016/j.mgene.2019.100615.

28. Papiya Das, Rana Majumdar, Anupam Ghosh; Image based Visual Sentiment Analysis Applying SVM and Deep learning; International Journal of Recent Technology and Engineering (Accepted); 2019

- **International Journal papers (2020)**

29. Biswajit Biswas, Swarup Kr Ghosh, MoumitaHore, Anupam Ghosh; "SIFT Based Visual Tracking using Optical Flow and Belief Propagation Algorithm", ***The Computer Journal***; 2020; DOI: https://doi.org/10.1093/comjnl/bxz155;(SCIE-IF 1.49)

30. Biswajit Biswas, Swarup Kr Ghosh, Anupam Ghosh, Chandan Chakraborty and Pabitra Mitra; "Target Object Recognition Using Multiresolution SVD and Guided Filter with Convolutional Neural Network"; ***International Journal of Pattern Recognition and Artificial Intelligence***; 2020; DOI:https://10.1142/s0218001420520084(SCIE-IF 1.37)

31. Anjan Kumar Payra, AnupamGhosh;"Identifying Essential Proteins using Modified-Monkey Algorithm (MMA)"; ***Computational Biology and Chemistry***, 2020; (SCI-IF 3.73); DOI: https://doi.org/10.1016/j.compbiolchem.2020.107324

32. Swarup Kr Ghosh, Biswajit Biswas, Anupam Ghosh; "Development of Intuitionistic Fuzzy Special Embedded Convolutional Neural Network for Mammography Enhancement"; ***ComputationalIntelligence***; 2020; https://doi.org/10.1111/coin.12391; (SCIE-IF 2.330)

33. Swarup Kr Ghosh, Anupam Ghosh;"A Novel Human Diabetes Biomarker Recognition Approach Using Fuzzy Rough Multigranulation Nearest Neighbour Classifier Model". ***Interdisciplinary Sciences: Computational Life Sciences*** (2020). https://doi.org/10.1007/s12539-020-00391-7 (SCIE-IF 2.23)

34. Swarup Kr Ghosh, Biswajit Biswas, Anupam Ghosh; "A novel Approach of Retinal Image Enhancement using PSO System and Measure of Fuzziness"; Procedia Computer Science; Volume 167, Pages 1300-1311,2020;DOI: https://doi.org/10.1016/j.procs.2020.03.446.

35. Sougata Sheet, AnupamGhosh, RanjanGhosh, AmlanChakrabarti; "Identification of Cancer Mediating Biomarkers using Stacked Denoising Autoencoder Model - An Application on Human Lung Data"; Procedia Computer Science; Volume 167, Pages 686-695,2020;DOI: https://doi.org/10.1016/j.procs.2020.03.341.

36. Swarup Kr Ghosh, Anirban Mitra, Anupam Ghosh; "A novel intuitionistic fuzzy soft set entrenched mammogram segmentation under Multigranulation approximation for breast cancer detection in early stages". ***Expert Systems with Applications*** (2020). https://doi.org/10.1016/j.eswa.2020.114329 (SCIE-IF 8.66)

37. Sujay Saha, SaikatBandopadhyay, Anupam Ghosh; "Identifying the degree of genetic interactions using Restricted Boltzmann Machine—A study on colorectal cancer". ***IET Systems Biology*** (2020). http://dx.doi.org/10.1049/syb2.12009(SCIE-IF 1.00)

- **International Journal papers (2021)**

38. S. K. Ghosh, A. Ghosh; "A novel intuitionistic fuzzy soft set based colonogramenhancement for polyps localization "***International Journal Imaging System Technoloy***;1–17; 2021DOI: https://doi.org/10.1002/ima.22551; (SCIE-IF: 2.00)

39. Swarup Kr Ghosh, Biswajit Biswas, Anupam Ghosh; "A novel stacked sparse denoising autoencoder for mammography restoration to visual interpretation of breast lesion." ***Evolutionary Intelligence*** (2020); DOI:https://10.1007/s12065-019-00344-0

40. Anjan Kumar Payra, Banani Saha, Anupam Ghosh, "Ortho_Sim_Loc: Essential protein prediction using orthology and priority-based similarity approach", ***Computational Biology and Chemistry***, 2021;DOI: https://doi.org/10.1016/j.compbiolchem.2021.107503; (SCIE-IF: 3.73)

41. Swarup Kr Ghosh, Anupam Ghosh; "Classification of Gene Expression Patterns using a novel Type-2 Fuzzy Multigranulation based SVM Model for the recognition of Cancer mediating biomarkers"; ***Neural Computing and Applications***; 2020; https://doi.org/10.1007/s00521-020-05241-7; (SCIE-IF 5.606)

42. S. K. Ghosh, A. Ghosh; "A novel retinal image segmentation using rSVM boosted convolutional neural network for exudates detection", ***Biomedical Signal Processing and Control***; 2021; DOI: https://doi.org/10.1016/j.bspc.2021.102785, (SCIE-IF: 5.606)

43. S. K. Ghosh, A. Ghosh; "ENResNet: A novel Residual Neural Network for Chest X-ray enhancement based COVID-19 detection", ***Biomedical Signal Processing and Control***;2021; DOI: https://doi.org/10.1016/j.bspc.2021.103286. (SCIE-IF: 5.606)

- **International Journal papers (2022)**

44. A. Acharya, A. Aryan, S. Saha, A.Ghosh; Impact of Covid-19 on the human personality: An analysis based on document modeling using machine learning tools; ***The Computer Journal***, 2021; bxab207, https://doi.org/10.1093/comjnl/bxab207 (SCIE-IF: 1.494)

45.Biswajit Biswas, Swarup Kr Ghosh, Anupam Ghosh, "A novel intuitionistic-near fuzzy sets based image fusion approach: Development on hybrid MPI+OpenMP parallel model", ***Multimedia Tools and Applications***, https://doi.org/10.1007/s11042-022-12333-0; 2022 (SCIE-IF: 2.757)

46.Swarup Kr Ghosh, Anupam Ghosh;"A novel Hyperbolic Intuitionistic Fuzzy Divergence Measure based mammogram enhancement for visual elucidation of breast lesions", ***Biomedical Signal Processing and Control***; 2022;https://doi.org/10.1016/j.bspc.2022.103586; (SCIE-IF: 5.606)

47. Swarup Kr Ghosh, Anupam Ghosh, Siddhartha Bhattacharyya; "Recognition of Cancer Mediating Biomarkers using Rough Approximations enabled Intuitionistic Fuzzy Soft Sets based Similarity Measure", ***Applied Soft Computing Journal***; SCI/SCIE Impact Factor=8.26; May, 2022; https://doi.org/10.1016/j.asoc.2022.109052

48. Anjan Kumar Payra, Banani Saha, Anupam Ghosh; "MM-CCNB: Essential protein prediction using MAX-MIN strategies and Compartment of Common Neighboring Approach"; ***Computer Methods and Programs in Biomedicine***; Nov, 2022; SCI/SCIE Impact Factor=7.02; https://doi.org/10.1016/j.cmpb.2022.107247

- **International Journal papers (2023)**

49. A. Mukherjee, A. Ghosh "Predictive Framework for Crime Data Analysis using a Hybrid Logistic Regression — Support Vector Machine Based Ensemble Classifier Powered by CART (LR-SVMCART)", ***Multimedia Tools and Applications***; 82, 35357–35377 (2023) (SCIE-IF: 3.6). https://doi.org/10.1007/s11042-023-14760-z

50. S. S. khan, D. Sengupta, A. Ghosh, A.Choudhury, "MTCNN++: A CNN based Face Detection Algorithm Inspired by MTCNN", ***The Visual Computer***, 40, 899–917 (2024) (SCIE-IF: 3.5). https://doi.org/10.1007/s00371-023-02822-0

51. Smarta Sangui, Tamim Iqbal, Piyush Chandra Chandra, Swarup Kr Ghosh, Anupam Ghosh, "3D MRI Segmentation using U-Net Architecture for the detection of Brain Tumor",Procedia Computer Science, Volume 218, 2023, Pages 542-553, ISSN 1877-0509, https://doi.org/10.1016/j.procs.2023.01.036

52. Anuraag Biswas, Swarup Kr Ghosh, Anupam Ghosh, "Early Fire Detection and Alert System using Modified Inception-v3 under Deep Learning Framework", Procedia Computer Science, Volume 218, 2023, Pages 2243-2252, ISSN 1877-0509, https://doi.org/10.1016/j.procs.2023.01.200.

53. Anjan Kumar Payra, Banani Saha, Anupam Ghosh, "MEM-FET: Essential protein prediction using membership feature and machine learning approach", ***PROTEINS, Structure, Function, Bioinformatics***; https://doi.org/10.1002/prot.26577 (SCI, Impact factor: 2.9)

- **International Journal papers (2024)**

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Books:

1. Book title: Machine Learning Techniques and Analytics for Cloud Security; Book Series: Advances in Learning Analytics for Intelligent Cloud-IoT Systems; Editors: Rajdeep Chakraborty, Anupam Ghosh, Jyostna Kumar Mandal; Publisher: Scrivener Publishing, WILEY, USA; indexed in Scopus and web of science,Dec,2021, ISBN: 9781119762256; DOI: 10.1002/9781119764113

2. Book Title: Blockchain: Principles and Applications in IoT (1st ed.).Editors: R. Chakraborty, A. Ghosh, V. E. Balas, & A Elngar,; 2022 Chapman and Hall/CRC. https://doi.org/10.1201/9781003203957

3. Book title: Convergence of Deep Learning in Cyber-IoT Systems and Security; Rajdeep Chakraborty, Anupam Ghosh, Jyotsna Kumar Mandal, S. Balamurugan, Print ISBN:9781119857211 |Online ISBN:9781119857686 |DOI:10.1002/9781119857686; Nov 2022

4. Rajdeep Chakraborty (Editor), Anupam Ghosh (Editor) , Jyotsna Kumar Mandal (Editor), Tanupriya Choudhury (Editor), Prasenjit Chatterjee (Editor)Smart Edge Computing: An Operation Research Perspective, ISBN: 978-1-786-30863-4, March 2024, Wiley-ISTE, 272 pages

5. Chandan Banerjee (Editor), Rajdeep Chakraborty (Editor), Anupam Ghosh (Editor), Ahmed A. Elngar (Editor), "Fog Computing for Intelligent Cloud IoT Systems", ISBN: 978-1-394-17532-1, June 2024, Wiley; 464 pages

6. Anupam Ghosh et. al. (Editor/s), "Quantum Machine Learning in Industrial Automation" August 2025; DOI : 10.1007/978-3-031-99786-0; Springer (in Press)

14. Patent/Copyright: Registered

1. INTELLIGENT DECISION SYSTEM FOR DYNAMIC OF CHUCKING IN CRICKTET; L-121611/2023—12-05-2023

2. PRIVY ANALYST: A COMPUTER VISION POWERED FULLBODY MOTION ANALYSIS TOOL FOR TRACKING MULTIPURPOSE ACTIVITIES IN SPORTS AND EXERCISES: L-120633/2023 ---18-01-2023

15. Subjects taught/teaching in B. Tech., M. Tech. level and Ph.D level:

1) Operating Systems 2) Bioinformatics, 3) Data mining 4) Soft Computing 5) Data Science using R 6) Pattern recognition 7) Problem solving using C 8) AI & expert systems

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Dated : 18/01/2023

1. Registration Number : **L-120633/2023**

2. Name, address and nationality of the applicant :

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INDIAN
SIDDHARTHA BHATTACHARYYA , DHAKHINESWARI APARTMENT, FLAT 301, B. T. ROAD
8 HOLD, PANIHATI, OPPOSITE PANIHATI FIRE STATION-

16. Key Achievements/Awards/Lecture/Presentation:

Serial no.	Achievement	Awarded by (Organization)	Year
1.	Under my headship, *B.TECH Computer Sc. & Engineering of NetajiSubhash Engineering College* has been awarded 2-years Accreditation by NBA for 2016-17 & 2017-18 (assessment years 2013-14, 2014-15, 2015-16)		
2	"Faculty of the year 2010"	Netaji Subhash Engineering College	23rd January, 2011
3	"Partners in Success 2013"-- Recognized as Gold partner faculty under Inspire	Infosys	July, 2013
4	"Certificate for Recognition" -- for outstanding performance in Campus Connect Program as a SPoC(Single Point of Contact)	Infosys	July, 2012
5	Certificate on Pedagogical Training	Engineering Staff College of India	7th-29th Nov, 2008
6	Refresher course on "Parallel and Distributed Technologies for High performance Computing"	University Grand Commission	3rd - 22nd January, 2005
7	Short-term training program on "Induction Training"	National Institute of Technical Teachers Training and Research	19th - 31st March, 2007
8	Certification for High impact teaching skill" --	Wipro, Dale Carnegie	25th-30th

	"MISSION 10X		January, 2010
9	"Workshop on Linux Administration"-Trainer	NetajiSubhash Engineering College	21st – 23rd February, 2011
10	"Workshop on Bioinformatics"-Resource Person	University of Calcutta	12-13th February, 2009
11	International Conference Paper Presentation— *Authors: AnupamGhosh and Rajat K. De, "Gaussian Fuzzy Index (GFI) for cluster validation: identification of high quality biologically enriched clusters of genes and selection of some possible genes mediating lung cancer"*	PReMI'13	10-14th December, 2013
12	Performance in Campus Connect	Infosys	2015-2016
13	ACM project contest (Finalist)	ACM	2016
14	AICTE approved FDP coordinator "Foundation Program in ICT for Education"	MHRD, Govt. of India	3rd August, 2017 to 7th Sept, 2017
15	Resource Person of A two-day Workshop on NBA in collaboration with Islamic University of Science & Technology, J&K on December 14-15, 2017 under the TEQIP – III programme at New Delhi	MAKAUT, WB	14th – 15th Dec, 2017
16	Certified in "Outcome based Education"	Q&P division of Engineering Staff College of India, Hyderabad	12th -16th March, 2018
17	Smart India Hackathon 2018 Grand Finale, Ahmedabad (as a Mentor)	MHRD	29th - 31st March, 2018
18	ACM project contest (Finalist)	ACM	2018
19	"Outcome based Education"	QIP, ESCI Govt of India	2018
20	Fellow Nikhil Bharat SikhshaParisad	Nikhil Bharat SikhshaParisad	2021
21	Professional Member of Institute of scholars: ID: 2020A264; 2020	Institute of scholars	2020
22	Advisor, IEEE Computational Intelligence Society; 2020	IEEE Computational Intelligence Society, SBC, NSEC	2020
23	BOS member MAKAUT, BSc Data Sc. &B.Sc Cyber Security, 2019	MAKAUT	2019
24	Certificate of Appreciation in "Research Excellence",	Nikhil Bharat SikhshaParisad	2021
25	World Students' Day Award of Excellence-- "Enthusiastic Teacher-2021", 2021	Nikhil Bharat SikhshaParisad	2021
26	Sir C.V. Raman-" Technology Enthusiast" - Certificate of Recognition	All India Eminent Faculty Council of	2021

		Engineering,	
27.	Most Valuable Educator -2021	South Asian Chamber of Scientific Research & Development	2022
28	Certificate of Excellence	All India Eminent Faculty Council of Engineering,	2022
29	Life Member I2OR; Membership Number:I2OR/2020/00734	I2OR is registered MSME with Ministry of MSME, Govt. of India (UDYAM-PB-20-0002405)	2022
30	Session Chair of two International Conferences in 2022		
31	International Research Excellence Award - 2021-2022	I2OR is registered MSME with Ministry of MSME, Govt. of India (UDYAM-PB-20-0002405)	2022
32	Awards of "Outstanding Scientists"	National Education Brilliance Awards-2022	2022
33	FDP organized: 1 week workshop on "Image Processing and Biometrics" 20th July 2023 to 26th July 2023	SNU and NSEC	2023
34	KAVACH –Grand Finale (Bangalore)	MHRD	2023
35	State Level NAAC mentor	DTE, Govt of West Bengall	2023
36	Invited Talk on Bioinformatics and Gene expression data analysis	Future Institute of Technology	15th Jan -19th Jan 2024
37	Participated ICPC Amritapuri Asia contest	Amrita Vishwa Vidyapeetham – Amritapuri	27th Jan-28th Jan 2024
38.	SAP University Alliance Program: SAP S4HANA, SAP HANA	Sister Nivedita University, West Bengal, India	21st April to 26th April, 2025
39	AI mentor, TCS	TCS	2025

17. Student Guided:

Components	Up to June, 2023	In last three years
Number of UG projects	50	**20**
Number of PG projects	**21**	0

18. Academic Activities:

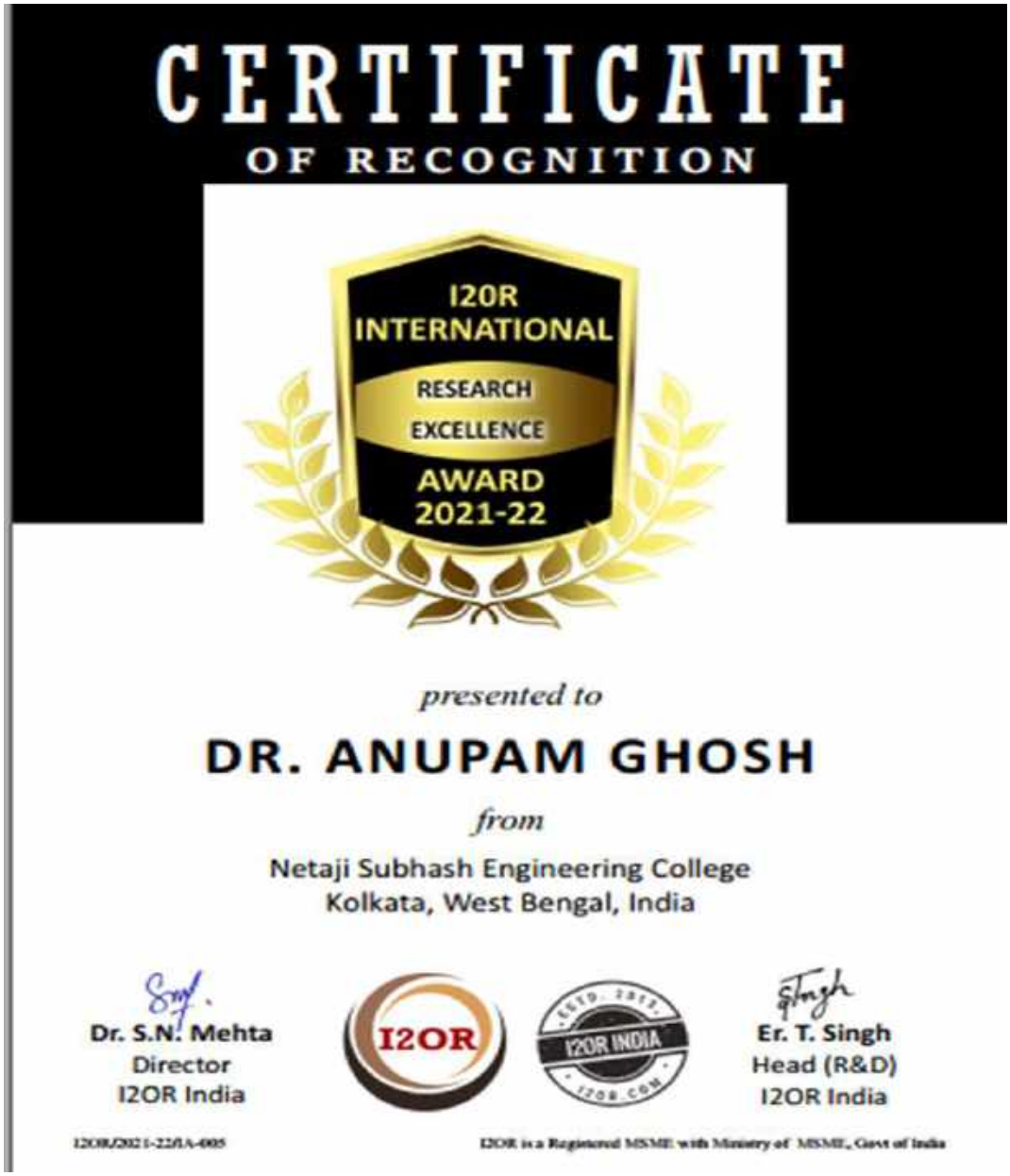
- Member of Board of Studies, MAKAUT: B.Sc Data Science and B.Sc Cyber Security
- Taking the classes of INFOSYS campus Connect.
- Organized and participated in 39 seminars/workshops/short-term courses/conference. (*Please see Annexure I.*)
- Set up the Bioinformatics research laboratory in 2007.
- Organized the seminars and workshops from 2006 under TEQIP (including BIOINFOCOM-2006, Courseware2007, and Patterncon2009).
- Appointed as 3rd year CSE teacher advisor.
- Taking the classes of M.Tech.,B.Tech, B.E students, mentoring the projects of B.Tech. and M.Tech. student.
- Associated with University of Calcutta, JadavpurUniversity as a Visiting Faculty

19. Administrative Activities:

- BOS member MAKAUT
- Head of the Department of Computer Sc. & Engineering from January, 2014 to February 2017.
- NBA coordinator, NSEC, from August, 2017 to 2019
- NBA coordinator (CSE), NSEC, from August, 2020 to Till date
- HOD AIML from 2023 (Additional Responsibility)
- In-charge Training Cell, NSEC from November, 2017 to till date
- Coordinator R&D Cell, NSEC from November, 2017 to till date
- Appointed as a SPoC person of Infosys Campus Connect Program from May, 2011 till date
- Appointed as the CSE Departmental in-charge during 29^{th}-30^{th} December 2009
- Convener of student's Committee (TEQIP phase I)
- Appointed as a University Station Supervisor (USS) during the semester examination.
- Member of Academic Committee
- Member of Central examination cell.
- Member of the anti ragging committee.
- Member of TIG cricket and football team

20.Extra-Curricular Achievements:

- 3^{rd} placed in the category of 100m and hit the wicket in ATHLETOSE'15
- Best Player Award in Football Tournament NSEC 2018-2019
- Man of the Match award Corporate Cricket league in a Group match NSEC vs MSIT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Er. T. Singh
Head (R&D)
I2OR India
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21. Major Responsibilities at TIG:

- Teaching and guiding the UG, PG students of SNU, NSEC, MSIT
- Guiding Faculty Research towards PhD
- Course coordinator of the course "Operating System" of TIG
- Active participation in various accreditation processes of TIG sister colleges
- NBA coordinator, NSEC, from August, 2017 to 2018
- SPoC -INFOSYS campus Connect, NSEC from 2011 to 2018
- SPoC – B.TECH CSBS (TCS), SNU from 2018 to 2019
- Academic Coordinator, Department of CSE and UG Departments of SNU from 2018 to 2019
- Academic Mentor, Department of CSE, IT and MCA Departments of MSIT
- Supervising Department of Computer Science & Engineering of SIT as a mentor of NBA-2017
- Curriculum development CSBS powered by TCS, Data Science, Cyber security—2018
- Coordinator R&D Cell, In-charge Training Cell NSEC from November, 2017 to 2018
- Member of Academic Committee NSEC

Annexure I: List of Short-term Courses/Seminars/Refresher Courses/Workshops/Conferences

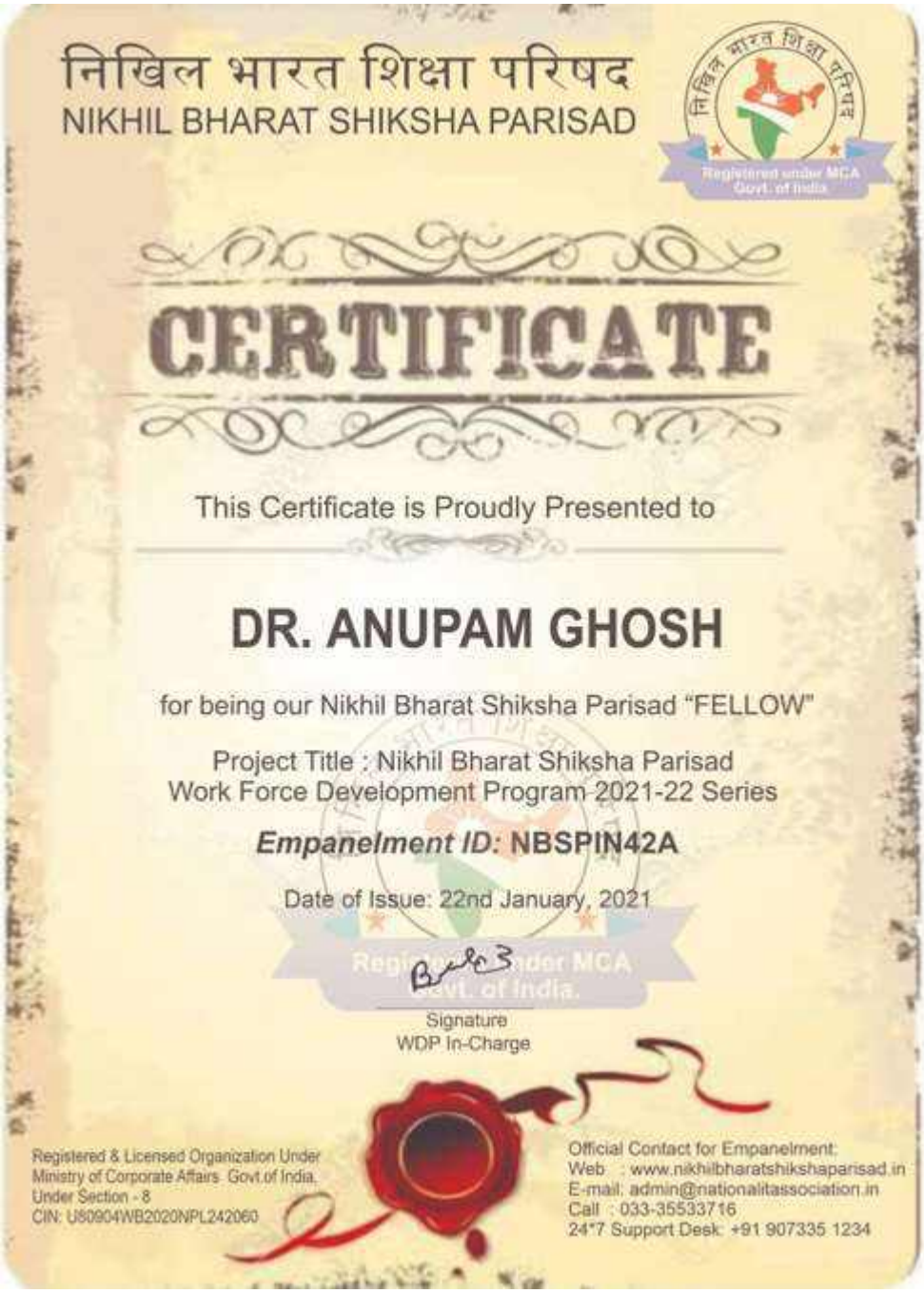
Serial	Title of the course	Organization	Duration	Venue
1.	Tutorial on "Embedded Systems and their Applications InMobile Communications"	IEEE Calcutta sections	1st October, 2004	Park Hotel, Kolkata
2.	Course on "Object Oriented Analysis and Design using UML with Rational Rose"	Education Centers for IBM software	3rd - 8th January, 2005	NetajiSubhashEngineeringCollege , Kolkata
3.	Refresher course on "Parallel and Distributed Technologies for High performance Computing"	UGC sponsored; Organized by JadavpurUniversity	3rd - 22nd January, 2005	JadavpurUniversity, Kolkata
4.	Short-Term course on "Soft Computing & Applications", under the QIP.	Sponsored by AICTE, organized by Bengal Engineering and ScienceUniversity, (now Indian Institute of Engineering, Science and Technology)	27th June to 8th July, 2005	Bengal Engineering and ScienceUniversity, (now Indian Institute of Engineering, Science and Technology) Howrah
5.	BIOINFOCOM '06	TEQIP organized by NetajiSubhashEngineeringCollege	31st March- 1st April, 2006	NetajiSubhashEngineeringCollege , Kolkata
6.	Short-Term course on "Embedded Systems"	Organized by Central Mechanical Research Institute, Durgapur,	27th December 2005 to 7th January 2006.	CMERI, Durgapur
7.	Short-Term course on "Introduction to Micro controllers, FPGAs and their applications in Embedded Systems"	TEQIP, organized by Bengal Engineering and ScienceUniversity, (now Indian Institute of Engineering, Science and Technology)	6th - 11th February 2006.	Bengal Engineering and ScienceUniversity, (now Indian Institute of Engineering, Science and Technology) Howrah
8.	Short-term training program on "Induction Training"	AICTE sponsored, Organized by NITTTR, Kolkata	19th - 31st March 2007.	NetajiSubhashEngineeringCollege
9.	Courseware'07	TEQIP organized by NetajiSubhashEngineeringCollege	26th April, 2007	NetajiSubhashEngineeringCollege
10.	Workshop on "XML and DB2"	IBM	26th - 28th July, 2007	Govt. college of Ceramic Technology, Kolkata
11.	BIOINFOCOM'07	TEQIP, organized by NetajiSubhashEngineeringCollege	Nov, 2007	NetajiSubhashEngineeringCollege
12.	International Conference on pattern-recognition(PReMI'07)	Indian Statistical Institute	18th-22nd Dec,2007	Indian Statistical Institute, Kolkata
13.	Soft-Comp 2008	NetajiSubhashEngineeringCollege , TEQIP	13th -14th March, 2008	NetajiSubhashEngineeringCollege
14.	Workshop on	Organized by AmericanCenter and	14th - 23rd	Techno India, Saltlake, Kolkata

	"Teaching Methodology"	Techno India Group, at Techno India, SaltLake, Kolkata	July, 2008.	
15.	Program on Pedagogical Training	QIP, EngineeringStaffCollege of India, Hyderabad	7th-29th Nov, 2008	EngineeringStaffCollege of India ,Hyderabad
16.	Workshop on LINUX System Administration	TEQIP, Bengal Engineering and ScienceUniversity, (now Indian Institute of Engineering, Science and Technology)	Dec,2008	Bengal Engineering and ScienceUniversity, (now Indian Institute of Engineering, Science and Technology) Howrah
17.	Courseware'09	TEQIP organized by NetajiSubhashEngineeringCollege	27th Feb, 2009	NetajiSubhashEngineeringCollege
18.	Building competency for academic management & industrial Collaboration"	TEQIP, organized by NetajiSubhashEngineeringCollege	March '2009 (7th ,14th ,21st ,28th)	NetajiSubhashEngineeringCollege
19.	Patterncon'09	TEQIP, organized by 2009	25th – 27th March '09	NetajiSubhashEngineeringCollege
20.	INSIGHT'09	*Infosys*	30th – 31st March, 2009	Infosys, Bhubaneswar
21.	Application of Bioinformatics in Today's experimental biology	School of Biotechnology & Biological Science; WBUT	9th – 11th Sept, 2009	WBUT, Saltlake, Kolkata
22.	MISSION 10X	Wipro, Dale Carnegie	25th-30th Jan,2010	MegnadSaha Institute of Tecnology, Kolkata
23.	Workshop on Linux Administration	NetajiSubhashEngineeringCollege	21st – 23rd Feb, 2011	NetajiSubhashEngineeringCollege
24.	National Level Workshop on Information Retrieval	IRSI &NetajiSubhashEngineeringCollege	21st July, 2012	NetajiSubhashEngineeringCollege
25.	ISTE Workshop on DBMS by IIT, Bombay (MHRD)	Indian Institute of Technology (Bombay),ICT(MHRD)	21st - 31stMay,2013	NetajiSubhashEngineeringCollege
26.	One day workshop on android applications	NetajiSubhashEngineeringCollege	Nov,2013	NetajiSubhashEngineeringCollege

Serial	**Title of the course**	**Organization**	**Duration**	**Venue**
27.	International Conference Paper Presentation—	PreMI'13, ISI	10-14th December, 2013	Indian Statistical Institute, Kolkata, India

	Authors: AnupamGhosh and Rajat K. De, "Gaussian Fuzzy Index (GFI) for cluster validation: identification of high quality biologically enriched clusters of genes and selection of some possible genes mediating lung cancer"			
28.	Mobile Applications using Android—TTT Program by Infosys	Infosys	21st to 23rd April,2014	NetajiSubhashEngineeringCollege
29.	Two week ISTE Workshop on Computer Networking	Indian Institute of Technology (Bombay),ICT(MHRD)	30thJune -5th July, 2014	NetajiSubhashEngineeringCollege
30.	Two day workshop on "Funding opportunities and success stories of capturing grant"	Techno India Group	11th July – 12th July, 2014	NetajiSubhashEngineeringCollege
31.	Two week ISTE main Workshop on Cyber Security	Indian Institute of Technology (Bombay),ICT(MHRD)	10th July – 20th July, 2014	NetajiSubhashEngineeringCollege
32.	4-week workshop on Use of ICT in Education for Online and Blended Learning	IIT, Bombay	2ndMay to 10th July, 2016	NetajiSubhash Engineering College
33	3-Day Workshop on	ACM	19th -21st January, 2017	Amity University, Kolkata

	iSIGCSE& ACM annual event			
34	10 days' Workshop on "IoT,Big Data & Cloud Computing"	NIT Patna	8th Feb – 18th Feb, 2017	Techno India, Saltlke
35	2 weeks Workshop on Machine Learning on Big Data	NIT Patna	4th -14th July,2017	Techno India, Saltlke
36	1 week workshop on "Outcome based Education"	ESCI, Govt of India	12th -16th March, 2018	ESCI, Hyderabad
37	3-days FDP on Computer Sc. & Business System	TCS	19th – 22nd June, 2018	ISI, Kolkata
38	3-days FDP on Computer Sc. & Business System	TCS	5th - 7th Dec, 2018	ISI, Kolkata
39	2-days FDP on Computer Sc. & Business System	TCS	27th – 28th June, 2019	ISI, Kolkata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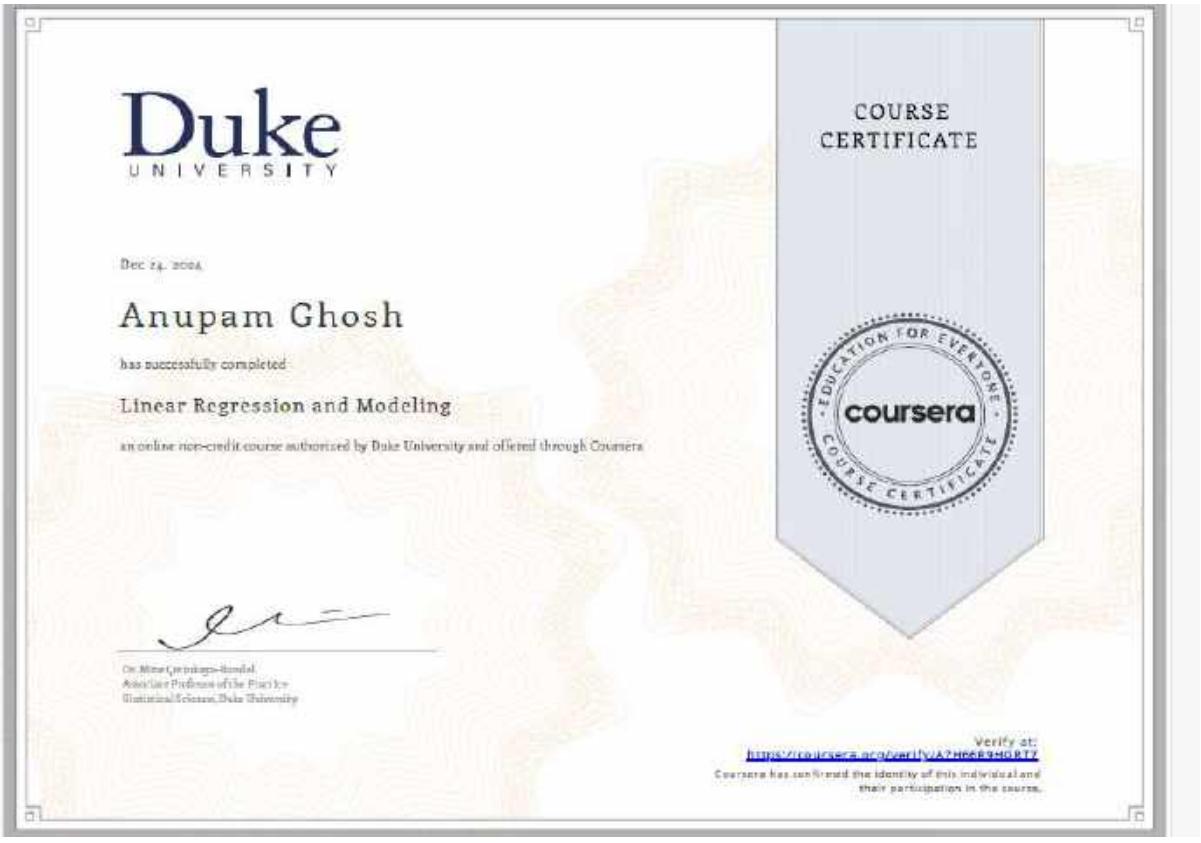
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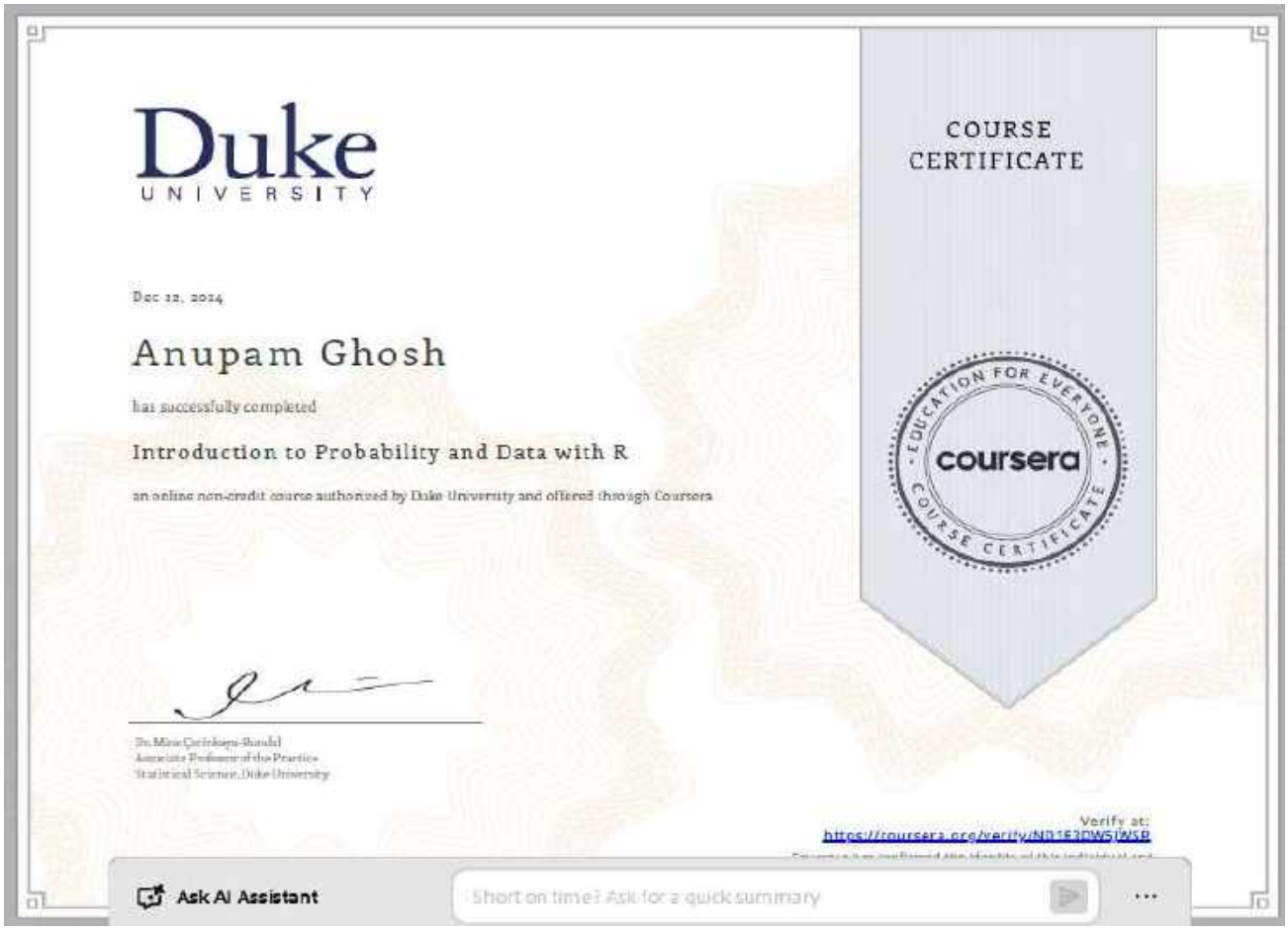

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Introduction to Probability and Data with R

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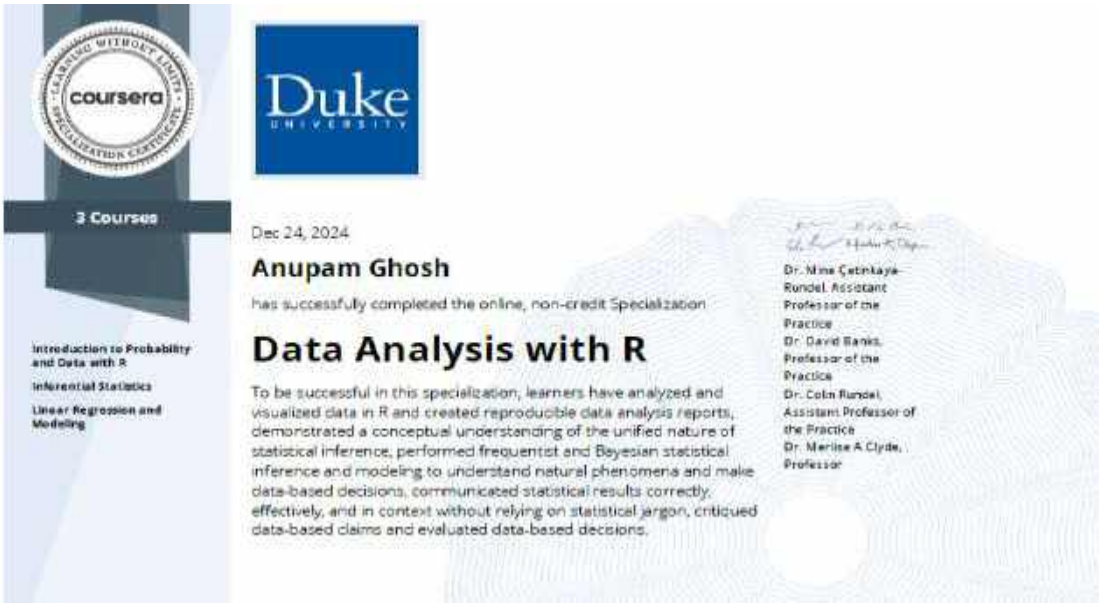
Short on time? Ask for a quick summary



3 Courses

Introduction to Probability and Data with R

Inferential Statistics

Linear Regression and Modeling

Duke UNIVERSITY

Dec 24, 2024

Anupam Ghosh

has successfully completed the online, non-credit Specialization

Data Analysis with R

To be successful in this specialization, learners have analyzed and visualized data in R and created reproducible data analysis reports, demonstrated a conceptual understanding of the unified nature of statistical inference, performed frequentist and Bayesian statistical inference and modeling to understand natural phenomena and make data-based decisions, communicated statistical results correctly, effectively, and in context without relying on statistical jargon, critiqued data-based claims and evaluated data-based decisions.

Dr. Nine Çetinkaya-Rundel, Assistant Professor of the Practice
Dr. David Banks, Professor of the Practice
Dr. Colin Rundel, Assistant Professor of the Practice
Dr. Merlise A Clyde, Professor

6 Courses

Data Visualization

Text Retrieval and Search Engines

Text Mining and Analytics

Pattern Discovery in Data Mining

Cluster Analysis in Data Mining

Data Mining Project

ILLINOIS

Mar 8, 2025

Anupam Ghosh

has successfully completed the online, non-credit Specialization

Data Mining

The Data Mining Specialization teaches data mining techniques for both structured data which conform to a clearly defined schema, and unstructured data which exist in the form of natural language text. Specific course topics include pattern discovery, clustering, text retrieval, text mining and analytics, and data visualization. The Capstone project task is to solve real-world data mining challenges using a restaurant review data set from Yelp.

John C. Hart, Professor of Computer Science, ChengXiang Zhai, Professor and Willett Faculty Scholar , Jiawei Han, Abel Bliss Professor

Certificate of Completion

SAP University Alliances

Train the Trainer Workshop

This is to Certify that
ANUPAM GHOSH

Has successfully attended the SAP S4HANA and SAP HANA Trainer Workshop from April 21 – 26, 2025 at Sister Nivedita University, Kolkata India

Rahul Sachdev
Director & Head,
SAP University Alliances
India Subcontinent

Prof Ramesh Behl
Director, International Management
Institute, Bhubaneswar

Dr. Anupam Ghosh
Professor, Dept of CSE
HOD, AIML
Netaji Subhash Engineering College