



Curriculum Vitae

Dr. Kousik Dasgupta

CONTACT INFORMATION

OFFICE ADDRESS: Department of Computer Science and Engineering
Kalyani Government Engineering College
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Kalyani 741235, India.

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PERSONAL REFERENCE

NATIONALITY: Indian

DATE OF BIRTH: 21st day of April, 1972

BLOOD GROUP: O Positive

RESEARCH INTEREST

I am interested in real-life applications based on the principles and techniques from the areas: Computer Vision, Machine Learning, Software defined networks (SDN), Evolutionary Computing.

EDUCATION

- 2017 **PhD, COMPUTER SCIENCE AND ENGINEERING, University of Kalyani, India**
Dissertation Topic: "Design and Implementation of Steganographic Engine for Secret Data sharing and Authentication of Videos: An Overture"
- 2007 **Master of Technology, COMPUTER SCIENCE AND ENGINEERING, West Bengal University of Technology, India with Distinction**
Thesis: "3D Object Extraction"
- 1993 **Bachelor of Engineering, ELECTRONIC AND POWER ENGINEERING, Nagpur University, India**
- 1996 **Post Graduate Diploma in BUSINESS MANAGEMENT, Nagpur University, India**

ACADEMIC EXPERIENCE

<i>Current</i> <i>from 1st January, 2010</i>	ASSISTANT PROFESSOR at Department of Computer Science and Engineering, Kalyani Government Engineering College, India
<i>19th November, 2007 to</i> <i>1st January, 2010</i>	SENIOR LECTURER at Department of Computer Science and Engineering, Kalyani Government Engineering College, India
<i>19th November, 2001 to</i> <i>19th November, 2007</i>	LECTURER at Department of Computer Science and Engineering, Kalyani Government Engineering College, India

5 th September, 1996 to 19 th November, 2001	TECHNICAL ASSISTANT at Department of Computer Science and Engineering, Kalyani Government Engineering College, India
January, 1996 to August, 1996	VISITING FACULTY MEMBER at Department of Computer Science and Engineering, Kalyani Government Engineering College, India

INDUSTRIAL EXPERIENCE

April, 1993 to December, 1995	GRADUATE ENGINEER at Esskay Associates, Nagpur, India and Lloyds Steel India Ltd, India
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LIST OF PUBLICATIONS

Books and Periodicals

- * **Editor** of “*ALGORITHMS IN MACHINE LEARNING PARADIGMS*”, Publisher: Springer Singapore; Co-editors: Prof. (Dr.) J.K. Mandal, Univ. of Kalyani, Kalyani, Dr. S. Mukhopadhyay, Assam Univeristy, Silchar, Assam, Prof. (Dr.) Paramartha Dutta, Visva-Bharati University, Santiniketan, ISBN: 978-981-15-1040-3, 978-981-15-1041-0, 2020, DOI <https://doi.org/10.1007/978-981-15-1041-0>.
- * **Editor** of “*COMPUTATIONAL INTELLIGENCE, COMMUNICATIONS, AND BUSINESS ANALYTICS*”, Second International Conference, CICBA 2018; (Vol. CCIS 1030 and 1031), Publisher: Springer Singapore; Co-editors: Prof. (Dr.) J.K. Mandal, Univ. of Kalyani, Kalyani, Dr. S. Mukhopadhyay, Assam Univeristy, Silchar, Assam, Prof. (Dr.) Paramartha Dutta, Visva-Bharati University, Santiniketan, ISBN: 978-981-13-8577-3, 978-981-13-8580-3, 2019.
- * **Editor** of “*METHODOLOGIES AND APPLICATION ISSUES OF CONTEMPORARY COMPUTING FRAMEWORK*”, Publisher: Springer; Co-editors: Prof. (Dr.) J.K. Mandal, Univ. of Kalyani, Kalyani, Dr. S. Mukhopadhyay, Assam Univeristy, Silchar, Assam, Prof. (Dr.) Paramartha Dutta, Visva-Bharati University, Santiniketan, ISBN: 978-3-319-47223-2, 2018.
- * **Kousik Dasgupta**, S. Bhattacharyya and P. Dutta, **Authored Book** entitled “*Intelligent Volumetric 3D Image Processing*”, John Wiley & Sons, Ltd. (in press).
- * **Editor** of “*GREEN COMPUTING AND PREDICTIVE ANALYSIS FOR HEALTHCARE*”, Publisher: CRC Press Taylor & Francis Group; Co-editors: Dr. Sourav Banerjee, Kalyani Government Engineering College, Kalyani, Dr. Chinmay Chakraborty, Birla Institute of Technology, Sindri. (in press).
- * P. Dutta, **K. Dasgupta**, M. Biswas, S. Bhattacharyya, **Authored Book** entitled “*Internet Technology*”, Matrix Educare.
- * P. Dutta, **K. Dasgupta** and K.P. Banerjee, **Authored Book** entitled “*System Software and Administration*”, Matrix Educare.
- * P. Dutta, **K. Dasgupta** and S. Bhattacharyya, **Authored Book** entitled “*Internetworking*”, Matrix Educare.

Journal

- Ratan Kumar Basak, Ritam Chatterjee, Paramartha Dutta and **Kousik Dasgupta** , “*Steganography in Color Animated Image Sequence for Secret Data Sharing using Secure Hash Algorithm*”, Accepted for Publicaiton on August,2021 In: *Wireless Pers Commun* (2021). Springer Singapore, 2021, (SCI, SCOPUS, ACM Digital Library)
- Gopa Mandal, Santanu Dam, **Kousik Dasgupta** and Paramartha Dutta. , “*A Linear Regression Based Resource Utilization Prediction Policy for Live Migration in Cloud Computing*”, In: Mandal J., Mukhopadhyay S., Dutta P., Dasgupta K. (eds) *Algorithms in Machine Learning Paradigms*. Studies in Computational Intelligence, vol 870. Springer, Singapore, 2020, Scopus Indexed.
- **Kousik Dasgupta** and Kamalesh Kundu, “*Hostility Index induced Image Steganography*”, in *CBS Journal of Management Practices* Vol.3, pp: 29-34, 2016.

- Debiprasad Bandyopadhyay, **Kousik Dasgupta**, J. K. Mandal and Paramartha Dutta, “A novel secure image steganography method based on Chaos theory in spatial domain”, in International Journal of Security, Privacy and Trust Management (IJSPTM) Vol 3, No 1, pp: 11-21, 2014.
- **Kousik Dasgupta**, J. K. Mandal and Paramartha Dutta “Hash Based Least Significant Bit technique for Video Steganography (HLSB)”, in International Journal of Security, Privacy and Trust Management (IJSPTM), ISSN 2277-5498, Academy & Industry Research Collaboration Center (AIRCC), pp 1-11, (DOI: 10.5151/ijstpm.2012.2201), 2012.
- Jayanta Kumar Pal, J. K. Mandal, and **Kousik Dasgupta**, “A (2, N) Visual Cryptographic Technique For Banking Applications”, in International Journal of Network Security & Its Applications (IJNSA), Vol. 2, No.4, pp 118-127, 2010.

Book chapter

- Nag, S., Ganguly, P. K., Roy, S., Jha, S., Bose, K., Jha, A. and **Dasgupta, K.** (2018). “Offline Extraction of Indic Regional Language from Natural Scene Image Using Text Segmentation and Deep Convolutional Sequence”, In Methodologies and Application Issues of Contemporary Computing Framework (pp. 49-68). Springer, Singapore.
- Roy, S., Pal, N., **Dasgupta, K.** and Gupta, B. (2018). “Understanding Email Interactivity and Predicting User Response to Email”, In Methodologies and Application Issues of Contemporary Computing Framework (pp. 69-79). Springer, Singapore.
- Santanu Dam, Gopa Mandal, **Kousik Dasgupta** and Parmartha Dutts, “An Ant-Colony-Based Meta-Heuristic Approach for Load Balancing in Cloud Computing”, in the book of Applied Computational Intelligence and Soft Computing in Engineering, IGI Global, Chapter 9, pp: 204-232, ISBN13: 9781522531296, DOI- 10.4018/978-1-5225-3129-6.ch009, 2017.
- **Kousik Dasgupta** , “Particle Swarm Optimization (PSO) for Optimization in Video Steganography”, in Book: Mandal, J. K., Mukhopadhyay, S. and Pal, T, Handbook of Research on Natural Computing for Optimization Problems, IGI Global. Chapter 15, pp:339-362, ISBN13-9781522500582, DOI-10.4018/978-1-5225-0058-2, 2016.

Conference

- * Dutta S. and **Dasgupta K.** “A Shallow approach to gradient boosting (XGBoosts) for prediction of the Box Office revenue of a Movie” accepted for publication in the Springer AISC Proceedings of International Conference on Innovations in Software Architecture and Computational Systems (ISACS - 2021).
- * Hazra J, Chowdhury A. R., **Dasgupta K**, and Dutta P, “Robust Optimized Structural Feature Based Transformation Parameter Estimation For Image Registration” (2021) accepted for publication in 2nd International Conference on Advanced Computing and Applications (ICACA-2021).
- * Chowdhury A. R., Hazra J., **Dasgupta K**, and Dutta P, “A Novel Equilibrium Optimization Technique for band selection of hyperspectral images”, accepted for publication in the Springer CCIS Proceedings of Third International Conference on Computational Intelligence, Communications, and Business Analytics (CICBA-2021).
- * Chowdhury A. R., Hazra J., **Dasgupta K**, and Dutta P, “Comparative study of the effect of different fitness function in PSO algorithm on band selection of hyperspectral images” accepted for publication in the Springer AISC Proceedings of Research and Applications in Artificial Intelligence (RAAI-2020).
- * Banerjee, P., **Dasgupta, K.**, Chatterjee, S., and Banerjee, R. (2019, April). “Abnormality Detection Using Image Quality Estimation Technique Through Border Surveillance For Wireless Transmission”, In 2019 International Conference on Ubiquitous and Emerging Concepts on Sensors and Transducers (UEMCOS) (Vol. 1, pp. 1-6). IEEE.
- * Mandal, L., and **Dasgupta, K.** (2019, February). “Use of Vedic Mathematics to Speed-up Basic Mathematical Operations in Android Based Calculator”, In 2019 International Conference on Intelligent Sustainable Systems (ICISS) (pp. 162-165). IEEE
- * Mandal, L., and **Dasgupta, K.** (2018, December). “A Multi-Utility Calculator App for Low Power Hand-Held Device”, In 2018 IEEE International Conference on Computational Intelligence and Computing Research (ICIC) (pp. 1-4). IEEE.

- * Basak, R. K., **Dasgupta, K.**, and Dutta, P. (2018, November). “*Steganography in Grey Scale Animated GIF using Hash based Pixel Value Differencing*”, In 2018 Fourth International Conference on Research in Computational Intelligence and Communication Networks (ICRCICN) (pp. 248-252). IEEE.
- * Dutta, S., Halder, A. and **Dasgupta, K.** (2018, November). “*Design of a novel Prediction Engine for predicting suitable salary for a job*”, In 2018 Fourth International Conference on Research in Computational Intelligence and Communication Networks (ICRCICN) (pp. 275-279). IEEE.
- * Mandal, G., Dam, S., **Dasgupta, K.** and Dutta, P. (2018, July). “*Load Balancing Strategy in Cloud Computing Using Simulated Annealing*”, In International Conference on Computational Intelligence, Communications, and Business Analytics (CICBA-2018) (pp. 67-81). Springer, Singapore.
- * Maji, B., Bhattacharya, I., Nag, K., Mishra, U. P. and **Dasgupta, K.** (2018, July). “*Study of Information Diffusion and Content Popularity in Memes*”, In International Conference on Computational Intelligence, Communications, and Business Analytics (CICBA-2018) (pp. 462-478). Springer, Singapore.
- * Sounak Mahanta, **Kousik Dasgupta**, “*A Framework for Ischemic Beat Detection using Multi - Layer Feedforward Neural Network and Principal Component Analysis (IBD-MLFFNN-PCA)*”, in Proceedings of the 2nd International Conference on Perception and Machine Intelligence, (pp. 77-84), 2015, doi:10.1145/2708463.2709050
- * Santanu Dam, Gopa Mandal, **Kousik Dasgupta**, Paramartha Dutta, “*Genetic Algorithm and Gravitational Emulation Based Hybrid Load Balancing Strategy In Cloud Computing*”, in Proc. of third International Conference on Computer, Communication, Control and Information Technology (C3IT), 2015, IEEE, (pp. 1-7), doi 0.1109/C3IT.2015.7060176, 2015.
- * Santanu Dam, Gopa Mandal, **Kousik Dasgupta**, Paramartha Dutta, “*An Ant Colony Based Load Balancing Strategy in Cloud Computing*”, in Advanced Computing, Networking and Informatics- Volume 2, Smart Innovation, Systems and Technologies Volume 28, 2014, Springer International Publishing, (pp. 403-413), doi10.1007/978 – 3 – 319 – 07350 – 7_45, 2014.
- * Debiprasad Bandyopadhyay, **Kousik Dasgupta**, J. K. Mandal, Paramartha Dutta, Varun Kumar Ojha, Václav Snásel, “*A Framework of Secured and Bio-Inspired Image Steganography Using Chaotic Encryption with Genetic Algorithm Optimization (CEGAO)*”, In Proceedings of the Fifth International Conference on Innovations in Bio-Inspired Computing and Applications IBICA 2014, (pp. 2194-5357), 2014
- * **Kousik Dasgupta**, Jyotsna Kumar Mandal, Paramartha Dutta, “*Optimized Video Steganography using Genetic Algorithm (GA)*”, in Proc. of First International Conference on Computational Intelligence: Modeling Techniques and Applications (CIMTA) 2013, Volume 10, 2013, (pp. 131-137). **(Presented the Paper)**
- * **Kousik Dasgupta**, Brototi Mandal, Paramartha Dutta, Jyotsna Kumar Mandal, Santanu Dam, “*A Genetic Algorithm (GA) based Load Balancing Strategy for Cloud Computing*”, in Proc. of First International Conference on Computational Intelligence: Modelling Techniques and Applications (CIMTA) 2013, Volume 10, (pp. 340-347), 2013.
- * Brototi Mondal, **Kousik Dasgupta**, Paramartha Dutta “*Load Balancing in Cloud Computing using Stochastic Hill Climbing-A Soft Computing Approach*”, in Proceedings of Elsevier Second International Conference on Computer, Communication, Control and Information Technology (C3IT2012), (pp 783-789), 2212-0173, 2012.
- * **Kousik Dasgupta**, Siddhartha Bhattacharyya, Paramartha Dutta and Jyotsna Kumar Mandal, “*A Three Dimensional Bi-directional Self-Organizing Neural Network (3-DBDSONN) Architecture for Three Dimensional Object Extraction From A Noisy Perspective*”, in Proceedings of IEEE Second International Conference on Emerging Applications of Information Technology (EAIT 2011), pp 309-312, February 2011 (978-0-7695-4329-1/11, 2011). **(Presented the Paper)**.
- * Jayanta Kumar Pal, J.K.Mandal, and **Kousik Dasgupta**, “*A Novel Visual Cryptographic Technique through Grey Level Inversion (VCTGLI)*”, in Communications in Computer and Information Science, in Recent Trends in Networks and Communications International Conference, NeCoM 2010, WiMon 2010, WeST 2010 Chennai, India, pp 125-133, July 2010. Springer-Verlag Berlin Heidelberg 2010.
- * **K. Dasgupta**, S.Bhattacharyya and P.Dutta, “*Three-Dimensional Object Extraction Using A Three-Dimensional Self-Organizing Neural Network (3DSONN) and its Two-Dimensional Counterpart: A Comparative Study*”, HETC Journal of Computer Engineering and Applications (2010).
- * **K. Dasgupta**, S. Bhattacharyya and P. Dutta, “*A Three-Dimensional Self-Organizing Neural Network Architecture For Three-Dimensional Object Extraction From A Noisy Perspective*”, in Proceedings of IEEE International Conference on Advanced Computing (ICAC-2009), Chennai, India, pp. 141-147, December 2009.

- * **K. Dasgupta**, S. Bhattacharyya and P. Dutta, “*A Neuro-Fuzzy Approach for 3D Object Detection and Extraction*”, in Proceedings of SPIT-IEEE Colloquium and International Conference, Mumbai, India, Vol 1, pp.-217-222, February 2008. **(Presented the Paper)**
- * **K. Dasgupta** and D.S. Mukherjee, “*A report on Computer Hardware and Networking Course: A course towards self sufficiency and Upliftment of Youths and Old dedicated as service to Community and Economy*”, in A Compendium of Action research Publication and Reports on Service to Community and economy under TEQIP, pp 174-180, 2007.
- * S. Bhattacharyya, P. Dutta, **K. Dasgupta** and A. Basu, “*Multiple target tracking using pixel hostility based segmentation of optical flow field*” in the Book of Abstracts of SOOP 05, pp. 56-58, 2005.
- * **K. Dasgupta**, S. Bhattacharyya and P. Dutta, “*Pure Color Object Extraction: A Distributed Approach*”, in Proceedings of ObComAPC 2004, Vellore, India, pp. 556-565, December 2004.
- * A. Basu, **K. Dasgupta** and K.P. Banerjee, “*Security in Grid Computing Environment: Privided by Traditional Security Technologies*”, in Proceedings of ObComAPC 2004, Vellore, India, pp. 514-521 December 2004.
- * S.K. Mondal, B. Bhowmik, **K. Dasgupta**, S. Bhattacharyya, K. Ghosh and P. De, “*TEQIP and its role in Developing the Quality of Technical Education*”, in Proc. Of National Conference on Integration of Strategies for Effective Quality Management in technical Education, pp. 173-180, December 2004.
- * **K. Dasgupta** and K.P. Banerjee, “*Beyond the Firewall: An approach towards next level of Network Security*”, in Proc. Of All India Seminar on e-security, GTBKIET, Chhapianwali, Malout, Punjab, pp. 104-109, May 2004.
- * P.Dutta, S. Bhattacharyya and **K. Dasgupta**, “*Multi-Scale Object Extraction Using A Self Organizing Neural Network with A Multi-Level Beta Activation Function*”, in Proc. Of International Conference on Intelligent Sensing and Information Processing, pp. 139-142, January 2004.
- * S. Bhattacharyya and **K. Dasgupta**, “*Color Object Extraction From A Noisy Background Using Parallel Multi-layer Self-Organizing Neural Networks*” in Proc. of CSI-YITPA(E) 2003, Kolkata, India, pp 32-36, November 2003. **(Presented the Paper)**

SPONSORED PROJECT IMPLEMENTED

February, 2014 till date	PRINCIPAL INVESTIGATOR AND ACADEMIC COORDINATOR WBDST-FIST Project on "Infrastructure development for modern research trends" funded by Department of Science and Technology, Government of West Bengal. India Amount- Rs. 9,00,000.00 Status: Ongoing
February, 2013 January, 2016	PRINCIPAL INVESTIGATOR RPS Project on "Design and Development of Framework for Multimedia Security and Forensic to Provide Digital Rights Management of Video" funded by AICTE, MHRD. Govt. of India Amount- Rs. 5,26,667.00 Status: Completed
March, 2013 February, 2015	PRINCIPAL INVESTIGATOR MODROBS Project on "Enrichment of Network and Internet Through State Of the art High End Equipment" funded by AICTE, MHRD. Govt. of India Amount- Rs. 11,30,000.00 Status: Completed
March, 2013 February, 2015	REMOTE CENTRE COORDINATOR of IIT Bombay for conduction Online courses on different topics of Engineering and Science for faculty and students, funded by National Mission on Education through ICT (MHRD, Govt. of India) Amount- Rs. 3,50,000.00 Status: Ongoing
March, 2013 February, 2015	AAKASH PROJECT REMOTE CENTRE COORDINATOR of IIT Bombay for use as an educational tool in collaboration with IIT Bombay. As a part of the Project IIT Bombay is developing useful Open source applications and content for use in Aakash along with deployment of tablets in engineering colleges for field testing of devices through actual users. As a coordinator of the remote centre of the college, my responsibility is to promote the R & D activities on "Aakash Tablet" and development of learning specific Android Apps, funded by National Mission on Education through ICT (MHRD, Govt. of India) Amount- Rs. 1,25,000.00 Status: Ongoing
March, 2004 January, 2006	CO-PRINCIPAL INVESTIGATOR MODROBS Project on "Enrichment of Network and Internet Through State Of the art High End Equipment" funded by AICTE, MHRD. Govt. of India Amount- Rs. 11,30,000.00 Status: Completed

INVITED LECTURES

- Invited as Resource person on "*Social Network Analysis* for **National level FDP on Shallow to Deep Learning and Applications (SDLA2017)** organized by Department of Computer Science and Engineering, RCC Institute of Information Technology, Kolkata during 07 - 11 November, 2017.
- Invited as Resource person in **FDP on Hybrid Computational Intelligence** under Electronics and ICT Academy, NIT Patna held at RCC Institute of Information Technology, Kolkata during 17 to 27 Jul, 2017.
- Invited as Resource person for TEQIP-II sponsored one week workshop on **Faculty and Staff Development Program on Linux & System Administration** organized by Department of Information Technology, RCC Institute of Information Technology, Kolkata during 20 - 24 July, 2015.
- Invited Lecture in **TEQIP-II sponsored two day Faculty Development program** on Recent Developments in Computer Science & Engineering on "*Cloud computing, issues and challenges*" organized by Department of Computer Science and Engineering, Government College of Engineering and Textile Technology, Berhampore during 15-16 November, 2013.
- Invited Lecture in **TEQIP-II sponsored two day Faculty and Staff Development program** on Image Pro-

cessing and Soft Computing on “*Particle Swarm Optimization (PSO): its application in Cloud Computing*” organized by Department of Computer Science and Engineering and Department of Information Technology, Murshidabad College of Engineering and Technology, Murshidabad College of Engineering and Technology, Murshidabad during 15-16 November, 2013.

- Invited Lecture series for giving training to School Teachers under **School Teachers Training Program** organized by Department of Computer Science and Engineering, University of Kalyani and IOTA during 2012-13.
- Invited Lecture in the **AICTE-ISTE sponsored winter school** on “*Windows Programming: GUI*” held in Department of Computer Science of Kalyani Government Engineering College during 06/01/2003 to 16/01/2003.
- Invited Lecture in the **TEQIP sponsored one-day seminar** on “*Internet Security*” organized by the Department of Computer Science and Engineering of Kalyani Government Engineering College on 28/04/2006.
- Invited Lecture in the **TEQIP sponsored one day workshop** on “*introduction of Linux Operating System*” organized by the Department of Computer Science and Engineering and Department of Mechanical Engineering of Kalyani Government Engineering College on 2005.

PH.D. THESES SUPERVISION

- Supervising **Mr. Joydev Hazra** for his Ph.D. entitled ENERGY AWARE INTELLIGENT CLUSTERING OF HIERARCHICAL WIRELESS SENSOR NETWORK as a part time scholar of the Department of Computer Science and Engineering of the *Maulana Abul Kalam Azad University of Technology, West Bengal* with effect from 04.10.2018.
- Supervising **Mr. Ratan Kumar Basak** for his Ph.D. entitled STUDY ON EMBEDDING AND EXTRACTION OF INFORMATION IN AND FROM AN ANIMATED IMAGE SEQUENCE as a part time scholar of the Department of Computer Science and Engineering of the *Maulana Abul Kalam Azad University of Technology, West Bengal* with effect from 04.12.2018.
- Supervising **Ms. Gopa Mandal** for her Ph.D. entitled DESIGN AND DEVELOPMENT OF INTELLIGENT AND DYNAMIC LOAD BALANCING STRATEGIES FOR CLOUD COMPUTING as a part time scholar of the Department of Computer Science and Engineering of the *Maulana Abul Kalam Azad University of Technology, West Bengal* with effect from 20.11.2019.
- Supervising **Ms. Aditi Roy Chowdhury** for her Ph.D. entitled BAND SELECTION OF HYPERSPECTRAL IMAGE USING HYBRID FRAMEWORK as a part time scholar of the Department of Computer Science and Engineering of the *Maulana Abul Kalam Azad University of Technology, West Bengal* with effect from 2019.

LIST OF P.G. AND U.G. PROJECTS GUIDED

P.G. Thesis Supervision :

S. No.	Name of Project guided	Year	Status
1.	Human Emotion Recognition	2020-21	Ongoing
2.	Scene detection		Ongoing
3.	Blockchain based E-voting systemm		Ongoing
4.	Design and development of framework for Digital ID Generation and Management using Blockhain	2019-20	Completed
5.	Motion recognition in Video Stream using Mask R-CNN Architecture		Completed
6.	Object detection and its application for Visually impaired persons using Machine Learning approaches		Completed
7.	Diet Chart Recommendation using Machine Learning Approaches		Completed
8.	A Model for Plant Seedlings Classification using Computer Vision based approach	2018-19	Completed
9.	Building a Model for Object Detection using Machine Learning Techniques		Completed
10.	Rough Sets Inspired Image Steganography	2017-18	Completed
11.	Detection and classification of marine fishes from images from ship deck		Completed

12.	An IoT based E-health care Application	2016-17	Completed
13.	Stabilization and Controlling of an UAV Quadcopter using Android Application		Completed
14.	Social Network Analysis (SNA) and Sentiment Analysis of Review Towards Analysing of Bollywood Movies	2015-16	Completed
15.	Visual Pattern Recognition in MNIST Handwritten data using Deep Architecture		Completed
16.	Diffusion of thoughts, ideas, sentiments in KGEC- A study of information diffusion in social network	2014-15	Completed
17.	Chaos Based Image Steganography	2013-14	Completed
18.	A Novel Approach to provide Authenticity using RSA encryption and Digital Signature in Cloud Computing environment		Completed
19.	Soft computing approaches for load balancing of virtual machining (VMs) in cloud computing	2012-13	Completed
20.	DCT based video steganography		Completed
21.	Video steganography using soft computing approaches in spatial domain		Completed
22.	3 - dimensional object segmentation	2011-12	Completed
23.	Towards design and implementation of (2,N) visual cryptographic technique for banking application		Completed
24.	Hardware realization of binary object extraction using BDSONN on TMS320C6713		Completed
25.	Hardware realization of BDSONN on c6713 dsp starter kit (DSK) An embedded object extraction approach	2010-11	Completed
26.	A Hidden marker model based online hand written bangla word recognition using mixture of circular distribution		Completed
27.	Implementation of Idea algorithm		Completed
28.	Design & implementation of utility server	2009-10	Completed

U.G. Project Supervision :

Have been guiding B. Tech projects since 2001, counting to 43(*Fortythree*). Broad areas include Machine Learning, Social network analysis, Intelligent Android application, Cloud Computing, Intelligent Bot design, 3-D Image Processing, System Administration, ERP solutions, developing of OS, Grid computing. A few also have been selected for BEST PROJECT AWARD by **Tata Consultancy Services (TCS)**. A short list of last U.G. Project supervised in last three years is as given below:

ADMINISTRATIVE AND TECHNICAL EXPERIENCE

Administrative Experience:

- Undertaken the charge of **Head, Department of Computer Science and Engineering, Kalyani Government Engineering College** regularly.
- **In-charge of External Examination** conducted in the college since 2013 till August 2019. Conducted examinations like *WBJEE, GATE, Presidency University entrance examination, JIPMAR, CET-III etc.*
- **In-charge of On-line Recruitment Examinations** conducted in the College by Tata Consultancy Service (TCS) and Microtrac, since 2013 till August, 2019.
- **U.G. Project Coordinator** have professionally managed the work of Project allocation, reviews of projects, counselling students for final submission after due plagiarism checks. since 2011-12 till 2018-19 session.
- **SPOC, Mentorship program** of Kalyani Government Engineering College for Maulana Abul Kalam University of Technology since 2018.
- **Mentor** for final year students of Computer Science and Engineering of Kalyani Government Engineering College since 2015 till date.
- **Chairman, Central Facility of Kalyani Government Engineering College** from 2005 to 2017, responsible for setup and maintaining the Internet, LAN and WAN of the College.
- Acted as **Laboratory In-charge** of Computer Center and Server Room of the Department of Computer Science and Engineering of Kalyani Government Engineering College from 2001 to 2009.

- Acted as **Laboratory In-charge** of all the laboratories of the Department of Computer Science and Engineering of Kalyani Government Engineering College from 2001 to 2009.

Technical Experience:

- **Configured and implemented Firewall and L3 switches** of the Campus WAN. Have configured Juniper SRX 550 and Sonicwall firewalls and L3 switches of Cisco, Juniper, Allied Telysys, D-Link.
- Implemented **Campus Wifi** system with Wireless Controller of Cisco and Aruba.
- Responsible for **implementing Web Server and hosting of college website** *www.kgec.edu.in* and *dedicated mail server @kgec.ac.in* of Kalyani Government Engineering College.
- Responsible for **design and implementation** of the official web site of Kalyani Government Engineering College *www.kgec.edu.in* using **dzango framework** hosted in AWS.
- Responsible for **configuration and implementation** of dedicated mail server *@kgec.ac.in* of Kalyani Government Engineering College using **Zimbra**.
- Responsible for implementing the **dedicated DNS server and e-mail gateway** of Kalyani Government Engineering College.
- Responsible for **Implementing Office Automation Software in Kalyani Government Engineering College**. The Software has four modules Human Resource Management, Financial Management, Student Management (include Examination Section and Training and Placement), Store Management. The software was developed using JSP as front-end and Oracle 10G on Solaris Server at the back-end.
- Responsible for **implementing Campus LAN** of Kalyani Government Engineering College with Fiber Optic Backbone, Layer 3 and Layer 2 Switches covering the whole college Campus including Hostels and Residential Complex in 2005.
- Responsible for **implementing the Leased Line Connection** at Kalyani Government Engineering College with dedicated wireless link with Router Firewall and Gateway / Proxy Server which is used by all communities of the college including Residential Complex and Hostels in 2005.
- Responsible for **implementing point to point wireless communication** between Main Building of College and one Hostels and Residential Complex for voice and data service of Kalyani Government Engineering College in 2006.
- Responsible for **Development of Computer Center** of Kalyani Government Engineering College with 150 terminals and 5-6 Central Servers, like Database server, C,C++ programming language server, DNS-DHCP Server, UNIX programming server, Windows 2003 server. The Computer Center has power supply through 80 KVA Online UPS and ready to connect internet connection and facility to take online classes or laboratory session using projectors and audio systems in 2007.
- Responsible for **implementing the NIS, NFS** in the Department of Computer Science and Engineering of Kalyani Government Engineering College.
- Responsible for **system administration** of Mainframe AS400, Servers like RS6000, SUN BLADE 2006, SUN ULTRA SPARC, Red Hat Linux, SCO UNIX V etc in the Department of Computer Science and Engineering of Kalyani Government Engineering College.

CONFERENCES/ FDPs/ WORKSHOPS ORGANIZED

27-28 July, 2018	PROGRAM CHAIR of the Second International Conference on Computational Intelligence, Communications, and Business Analytics (CICBA - 2018) at Kalyani Government Engineering College, Kalyani India.
30th Jan 2017 to 4th Feb 2017	COORDINATOR of Two weeks Short Term Course on CMOS, Mixed Signal and Radio Frequency VLSI Design in collaboration with National Mission on Education through ICT (MHRD, Govt. of India) and IIT Kharagpur at Kalyani Government Engineering College, Kalyani India.
2nd May 2016 to 10th July 2016	COORDINATOR Two weeks FDP on Use of ICT in Education for Online and Blended Learning

	in collaboration with IIT Bombay at Kalyani Government Engineering College, Kalyani India.
<i>15th Sep 2014 to 19th Sep 2014</i>	COORDINATOR Two weeks ISTE workshop on Control Systems in collaboration with IIT Kharagpur at Kalyani Government Engineering College, Kalyani India.
<i>10th July 2014 to 20th July 2014</i>	COORDINATOR Two weeks ISTE workshop on Cyber Security in collaboration with IIT Bombay at Kalyani Government Engineering College, Kalyani India.
<i>30th June 2014 to 5th July 2014</i>	COORDINATOR Two weeks ISTE workshop on Computer Programming in collaboration with IIT Bombay at Kalyani Government Engineering College, Kalyani India.
<i>20th May 2014 to 30th May 2014</i>	COORDINATOR Two weeks ISTE workshop on Fluid Mechanics in collaboration with IIT Kharagpur at Kalyani Government Engineering College, Kalyani India.
<i>2nd January 2014 to 12th January 2014</i>	COORDINATOR Two weeks ISTE workshop on Signals & Systems in collaboration with IIT Kharagpur at Kalyani Government Engineering College, Kalyani India.
<i>26th November 2013 to 6th December 2013</i>	COORDINATOR Two weeks ISTE workshop on Engineering Mechanics in collaboration with IIT Bombay at Kalyani Government Engineering College, Kalyani India.
<i>04th June 2013 to 13th June 2013</i>	COORDINATOR Two weeks ISTE workshop on Analog Electronics in collaboration with IIT Kharagpur at Kalyani Government Engineering College, Kalyani India.
<i>21st May 2013 to 31st May 2013</i>	COORDINATOR Two weeks ISTE workshop on Database Management Systems in collaboration with IIT Bombay at Kalyani Government Engineering College, Kalyani India.
<i>23rd - 24th Feb. 2013 and 2nd - 3rd March 2013</i>	COORDINATOR Four days workshop on Aakash Android Application Programming Workshop in collaboration with IIT Bombay (Team Akash) at Kalyani Government Engineering College, Kalyani India.
<i>2nd February 2013 and 9th February 2013</i>	COORDINATOR Two days ISTE workshop on Research Methodology in Education Technology in collaboration with IIT Bombay at Kalyani Government Engineering College, Kalyani India.
<i>11th December 2012 to 21st December 2012</i>	COORDINATOR Two weeks ISTE workshop on Engineering Thermodynamics in collaboration with IIT Bombay at Kalyani Government Engineering College, Kalyani India.
<i>10th November 2012 and 11th November 2012</i>	COORDINATOR Two days ISTE workshop on Aakash for Education

in collaboration with IIT Bombay at Kalyani Government Engineering College, Kalyani India.

Have successfully conducted **twelve numbers** of **Computer Hardware and Networking** course since 2001 as COURSE COORDINATOR in collaboration with Centre for Adult Continuing and Education, Kalyani University, Kalyani.

Have conducted **several talks / courses** for students of Kalyani Government Engineering College giving **lectures on modern day topics and carrier counselling**.

SHORT TERM COURSES/ CONFERENCES/SEMINARS/WORKSHOPS ATTENDED

- Attended **Online Conference** on AWS INNOVATE MACHINE LEARNING & AI EDITION held on *19 February, 2020*.
- Participated in **two-day workshop** on BIG DATA ANALYTICS (WBDA-2015), co-organised by ACM student chapter, ISI Kolkata and Indian Statistical Institute, Kolkata held on *20-21 August, 2015*.
- Participated in **one day workshop** on CLOUD COMPUTING AND THE ANEKA PLATFORM, conducted by Department of Computer Science & Engineering and A. K. Choudhury School of Information Technology, University of Calcutta held on *16th April, 2014*.
- Participated in **two day workshop** on COMPUTATIONAL METHODOLOGIES AND APPLICATIONS (CMA-2013), conducted by Department of Compute Science and Engineering, University of Kalyani and Department of Computer Science & technology, Bengal Engineering and Science University, Shibpur held on *22-23 April, 2013*.
- Participated in **one day workshop** on COMPUTATIONAL INTELLIGENCE IN BRAIN-COMPUTER INTERFACE AND CONTEXT-AWARE SERVICE MANAGEMENT, conducted by Calcutta Chapter of IEEE CIS and Indian Statistical Institute, on *14th March, 2011*.
- Attended SECOND INTERNATIONAL CONFERENCE ON EMERGING APPLICATIONS OF INFORMATION TECHNOLOGY organized by IEEE and Computer Society of India, held on *February 19-20, 2011*.
- Participated in **Three day Workshop** followed by **Two Days Tutorial** on GEOGRAPHICAL INFORMATION SYSTEM, IMAGE PROCESSING AND GPS organized by Kalyani Government Engineering College, held on *27/06/2008 to 01/07/2008*.
- Attended SPIT-IEEE COLLOQUIUM AND INTERNATIONAL CONFERENCE organized by IEEE R-10 TAC and SPIT Mumbai, during *04/02/2008 to 05/02/2008*.
- Participated in **Two day Workshop** on EMBEDDED SYSTEM, RTOS organized by IEEE R-10 TAC and SPIT Mumbai, held on *04/02/2008 to 05/02/2008*.
- Participated in **Three day Workshop** on RECENT TRENDS IN COMMUNICATION SYSTEMS AND NETWORKING organized by Kalyani Government Engineering College, during *29/03/08 to 31/03/08*.
- Participated in **Workshop** on CRYPTOGRAPHY – YESTERDAY, TODAY & TOMORROW organized by Department of Computer Science and Engineering, Kalyani Government Engineering College, Kalyani held on *07/06/2006*.
- Attended **Seminar** on MOBILE TECHNOLOGY & INFORMATION MANAGEMENT held in the Department of Computer Science and Engineering, Kalyani Government Engineering College, Kalyani on *03/04/2006*.
- Attended **Seminar** on EVOLUTIONARY AND OTHER SOFT COMPUTING TECHNIQUES IN ENGINEERING APPLICATIONS held in the Kalyani Government Engineering College, Kalyani on *28/02/2006*.
- Participated in **Workshop** on WIRELESS NETWORKING AND MOBILE COMPUTING organized jointly by West Bengal Academy of Science and Technology and IEEE Calcutta Section held on *13/03/2004*.
- Participated in **Two day Workshop** on MICROELECTRONICS AND VLSI DESIGN TECHNIQUES held in the Department of Electronics and Communication Engineering, Kalyani Government Engineering College during *17/09/2005 to 18/09/2005*.

MEMBERSHIPS IN PROFESSIONAL BODIES

- Professional Member of Association for Computing Machinery (ACM) (3873325 vide June, 2012).
- Life Member of the Indian Society for Technical Education (LM 44062 vide year 2004).

- Fellow Member of the Optical Society of India (L M No: 490 vide year 2004).
- Associate Member of The Institute of Engineers (India) (AM091082-4 vide year 2003).
- Chartered Engineer [India] of The Institute of Engineers (India) (AM091082-4 vide year 2003).

OTHER PROFESSIONAL EXPERIENCE

- * Undertook Teaching assignment as Guest Lecturer for Choice Base Credit System Course for Master Degree students in Department of Business Administration University of Kalyani.
- * Undertook Teaching assignment as Guest Lecturer for Computer Network Course for MCA students in Department of Computer Science and Engineering University of Kalyani.
- * Undertook Teaching assignment as Guest Lecturer for M.Sc in Computer Science and Engineering Department, Rashtraguru Surendranath Banerjee College.
- * Undertaking Teaching assignment as Guest Lecturer for M. Tech and MCA in Computer Science and Engineering, University of Kalyani.

HONOURS OF NOTE

- * Involved as a **Mentor and SPOC** for SMART INDIA HACKATHON 2017 (SIH 2017) and SMART INDIA HACKATHON 2018 (SIH 2018). One of the teams won the challenge in SIH 2018.
- * Involved as a **Mentor** of Team BreakThrough in ACM-ICPC ASIA KHARAGPUR REGIONAL CONTEST, 2014. The team *ranked within top 100*.
- * Involved as a **Mentor** of Team nexuskgec for participating in THE GREAT MIND CHALLENGE-2009, an Annual National Software Development Program by IBM.
- * **Participated in Young IT Professional Awards 2003** organized by CSI, Kolkata Chapter with a publication "Color Object Extraction From A Noisy Background Using Parallel Multi-layer Self-Organizing Neural Networks" in Proceedings of CSI-YITPA(E) 2003, Kolkata, India, pp 32-36, November 2003. The paper was selected among **top nine(09)**.
- * Involved as **Moderator for P.G and U.G course** of NARULA INSTITUTE OF TECHNOLOGY, KOLKATA UNDER JIS UNIVERSITY.
- * Involved as **Moderator for P.G and U.G course** of JIS COLLEGE OF ENGINEERING, KALYANI.
- * Involved as **Moderator for M.Sc in Microbiology** in connection with 4th and 2nd Semester Examinations under *University of Kalyani*.
- * Served as **External Examiner** for MCA, B.Sc (Honours) and B.Sc. (General) Practical Examination of *University of Kalyani*.
- * Served as **Paper Setter and Examiner** for MCA examination under *Visva Bharati*.
- * Served as **Paper Setter and Examiner** for B. Tech and MCA examination under *West Bengal University of Technology*.
- * Served as **Paper Setter and Examiner** for M. Tech, MCA, B.Sc (General) and B.Sc (Honors) examinations under *University of Kalyani*.

CORPORATE ACTIVITIES

- Handled state-of-the-art products from the house of **Siemens**, involved with R & D team of Siemens engaged in developing software related to Voice over IP.
- Assisted **SysCommune** for implementing various projects related to LAN, WAN AND INTEGRATING OF VIDEO CONFERENCING SYSTEM. DEVELOPED A TOTAL NDS ON NOVELL NETWARE, INTEGRATED UNIX AND WINDOWS NT IN A SAME NETWORK.

SCHOLARSHIPS AND CERTIFICATES

AUGUST 1987	Government of Maharashtra, Merit Scholarship for students earning distinction in Secondary School Certificate (S.S.C.) Examination
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LANGUAGES

ENGLISH: Fluent(Speak, Read, Write)
BENGALI: Mothertongue (Speak, Read, Write)
HINDI: Fluent(Speak, Read, Write)
MARATHI: Fluent(Speak, Read, Write)

COMPUTER SKILLS

Programming Languages: C, C++, PYTHON, JAVA
Operating System: UBUNTU, FEDORA, REDHAT LINUX, SCO UNIX V, IBM AIX, SUN SOLARIS, OS400, MAC OS
Professional editors: LATEX, MICROSOFT WORD, EXCEL, POWERPOINT

REFERENCES

- * **Dr. Paramartha Dutta**,
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Shantiniketan - 731235.
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- * **Dr. J. K. Mandal**,
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Kalyani - 741235.
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Phone No: +919434352214

(DR. KOUSIK DASGUPTA)

Date:

Place: Kalyani