Curriculum Vitae

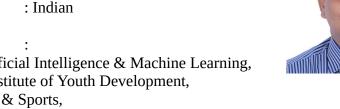1. Name   : **Dr. B. Rajesh Kanna**

2. Nationality   : Indian

3. Address for Communication   :
   Computer Sciences - Artificial Intelligence & Machine Learning,
   Rajiv Gandhi National Institute of Youth Development,
   Ministry of Youth Affairs & Sports,
   Sriperumbudur Post, Tamil Nadu – 602105

4. Academic Qualifications

Degree	Passed out year	Program	Class	Institute / University / College
Ph.D	2012	Computer Science & Engineering	--	SASTRA University, Thanjavur
Diploma	2004	Bio-informatics	First	National University of Singapore
P.G	2003	Computer Science & Engineering	Distinction with first class with	Mepco Schlenk Engineering College, Virudhunagar / Madurai Kamaraj University
U.G	1993	Science	First	V.H.N.S.N College, Virudhunagar / Madurai Kamaraj University

5. Areas of Specialization
   - Digital Image analysis
   - Computer vision
   - Hypergraph-based models for digital image engineering

6. Current Research Interest
   - Development of deep learning models for computer vision applications
   - Unmanned aerial vehicle's path planning
   - Development of haptic based code for secured information exchange

7. Present Position
   - Associate Professor
     Computer Science – Artificial Intelligence and Machine Learning

8. Immediate Past Position:
   - Professor Grade II, Computer Science & Engg, Vellore Institute of Technology, Chennai
   - Professor Grade I, Computer Science & Engg, Vellore Institute of Technology, Chennai
   - Associate Professor, Computer Science & Engg, Vellore Institute of Technology, Chennai
   - Assistant Professor Selection Grade, Computer Science & Engg, VIT, Chennai
   - Assistant Professor, Computer Applications, St. Joseph's College of Engineering, Chennai
   - Lecturer, Computer Applications, VLB Janaki Ammal Engineering College, Coimbatore
   - Demonstrator, Mepco Schlenk Engineering College, Virudhunagar

9. Other Important Academic and Administrative Assignments:

- Member of the Grievance Redressal Committee for Teaching Staff in RGNIYD since February 2023
- Vice-President, RGNIYD Alumni Association, since February 2023
- Program-Chair (HoD), B.Tech CSE from 17/06/2017 to 20/06/2019 at VIT
- Program-Chair (HoD), M.Tech. CSE, from 15/06/2013 to 16/06/2013 a VIT
- Member of the Institutional Student Grievance Redressal Committee from 16/8/19 to 02/02/23 at VIT
- The school coordinator for the course "Technical answers for real-world problems" for 3 years at VIT.
- The school coordinator for Research-Based Learning (RBL), a mandatory course for all PG students, spend one year at VIT
- The School Coordinator for the Student Seminar Series is focused on building up a common platform for students' career development activities at VIT.
- institutional level purchase committee from August 2005 to April 2012 at St. Joseph's Engg.
- Web portal and email server management from 2007 to 2012 at St. Joseph's Engg.

10. Total Teaching Experience   :   24 Years

11. Total Research Experience   :   17 Years

12. Training Experience   :   --

13. Invited Lecture Delivered in the Last Three Years: 17 *(from 2020 to March 2023)*

14. Conference/Workshop/Seminar Attended in the Last Three/Five Years : *Refer Appendix-A*

15. Award Received :

Name of the Award	Name of Awarding Institute / Agency	Year
Doctoral Research Award	Archers & Elevators, Bangalore	2017
Best research Poster Award	Association for Computing Machinery (ACM), New York	2013
Awarded with distinction in Master's degree	Madurai Kamaraj University, Madurai	2003
Research award	Vellore Institute of Technology, Chennai	2016 -2019

Recognition - Overseas visit invitation and support : ACM SIGSOFT has chosen him as one of the research students to receive a scholarship to attend the ACM Turing Centenary Celebration, to interact with 34 Turing Award winners in 2012 in San Francisco.

16. Experience of Supervision of Doctoral Thesis
- Pursuing   :   Nil
- Completed   :   Three

17. Research Projects (On-going and Completed)
- Completed   :   1
  - Photonic Disinfection to Combat COVID-19 using Indoor unmanned aerial vehicle
- On-going   :   0

18. List of Publication in the Recognized Journals (last five years , from 2018 to March 2023):

Journals (Selected publications) **:**

[1] S. Bharathiraja, B. Rajesh Kanna, S. Geetha, M. Hariharan, Exposing digital image forgeries from statistical footprints, Journal of Information Security and Applications, 69,2022,103273, DOI : 10.1016/j.jisa.2022.103273.

[2] Dinesh Jackson Samuel R, B. Rajesh Kanna, A Fuzzy strategy to eliminate uncertainty in grading positive Tuberculosis, International Journal of Computational Intelligence and Applications, World Scientific Publishing Europe Ltd. 21 (1), 2250006, 2022. DOI: 10.1142/S1469026822500067

[3] Bharathiraja S, Rajesh Kanna B, Hariharan M, Arabian Journal for Science and Engineering, A Deep Learning Framework for Image Authentication: An automatic Source Camera Identification Deep-Net, Accepted on February 2022. DOI : 10.1007/s13369-022-06743-3

[4] A. Vijayalakshmi, B. Rajesh Kanna, C. Vijayalakshmi, Extrinsic parameter's adjustment and potential implications in Plasmodium falciparum malaria diagnosis. Microscopy Research and Technique, 85(2), 685–696, 2022, https://doi.org/10.1002/jemt.23940

[5] A. Vijayalakshmi, B. Rajesh Kanna, Deep learning approach to detect malaria from microscopic images, Multimedia Tools and Applications, Springer, 79, 15297-15317, 2020, DOI : 10.1007/s11042-019-7162-y

[6] Dinesh Jackson Samuel R, Rajesh Kanna B, Cybernetic microbial detection system using transfer learning. Multimedia Tools and Applications, Springer, 79, 5225–5242, 2020, DOI: https://doi.org/10.1007/s11042-018-6356-z

[7] Bharathiraja S, Rajesh Kanna B, Anti-Forensics Contrast Enhancement Detection (AFCED) Technique in Images Based on Laplace Derivative Histogram, Mobile Networks and Applications, 24 (4) 1174-1180, 2019, DOI: https://doi.org/10.1007/s11036-019-01255-1

[8] R.D Jackson Samuel, B. Rajesh Kanna, A Programmable microscopic stage: Design and Development, Microscopy research and Technique, Wiley, 82(4), 429-442, 2019, DOI 10.1002/jemt.23184

[9] R.D Jackson Samuel, B. Rajesh Kanna, Tuberculosis Detection system using Deep neural networks, Neural Computing and Applications, Springer, 31(5), 1533-1545, 2019, DOI:10.1007/s00521-018-3564-4,

[10] B. Rajesh Kanna, Mohd Shafi Bhat, Vijayalakshmi C , Alex Noel Joseph Raj, Model to estimate the salt and pepper noise density level on gray-scale digital image, EAI Endorsed Transactions on Energy Web and Information Technologies, 18(18), 1-7, 2018, DOI: http://dx.doi.org/10.4108/eai.12-6-2018.154816

Patent and Design Journal – IPR

[1] B. Rajesh Kanna, "Secured Information Exchange method & System using Haptic codes", Application number 201841022636, reference no. E2/1890/2018-CHE and dated on 17.06.2019. (FER reply filed and application in amended examination)

[2] B. Rajesh Kanna, A. Vijayalakshmi, C. Vijayalakshmi, "Method to normalize microscopic image feature to facilitate robust learning in clinical pathology, Application number: 202041036034 dated on 25.08.2020. (FER reply filed and application in amended examination)

[3] B. Rajesh Kanna, C. Sweetlin Hemalatha, R. Manoj Kumar, Automated Disinfection system, Application number: 202241046842 dated on 26.08.2022. (FER reply filed and application in amended examination)

19. Consultancy Services
- Completed   :   2
  - Training Automation Process for Hyundai Mobis, Hyundai Mobis
  - Development of deep learning technique for Skin Analysis, Samsung India
- On-going   :   0

20. Member of Any Academic Body:
- Member of the Board of Studies in Computer Science and Engineering for three autonomous institutions.
- Member of IQAC External Academic Audit to SSN college of Engineering.
- Ph.D Doctoral committee member for Anna University, Chennai and SRM Institute of Technology, Chennai

21. Book (Edited and Written):
- Book authored
  - Development of Hypergraph based Techniquesfor Selected Image Engineering Applications, Archers & Elevators Publishers, 2018, ISBN 978-93-86501-63-9
- Book chapter authored *(Selected publications)*
  - Rajesh Kanna, and C.Vijayalakshmi, Touch and Voice-Assisted Multilingual, Communication Prototype for ICU Patients Specific to COVID-19, Smart Healthcare System Design: Security and Privacy Aspects, 71-85, 2021, Wiley, ISBN : 9781119791683, https://onlinelibrary.wiley.com/doi/10.1002/9781119792253.ch4
  - Design to automate the detection and counting of Tuberculosis(TB) bacilli, Dinesh Jackson Samuel, Rajesh Kanna Baskaran, Electrical Engineering and Systems Science, Image and Video Processing, May 2021, https://arxiv.org/abs/2105.11432v1
  - Sivakumar S., Rajalakshmi R., Prakash K.B., Kanna B.R., Karthikeyan C. (2020) Virtual Vision Architecture for VIP in Ubiquitous Computing. In: Paiva S. (eds) Technological Trends in Improved Mobility of the Visually Impaired. EAI/Springer Innovations in Communication and Computing. Springer, Cham. ISBN: 978-3-030-16449-2, https://doi.org/10.1007/978-3-030-16450-8_7.
  - B. Rajesh Kanna, "Secured Information Exchange Using Haptic Codes." Countering Cyber Attacks and Preserving the Integrity and Availability of Critical Systems. IGI Global, 2019. 267-274. Web. 16 May. 2019. doi:10.4018/978-1-5225-8241-0.ch014. ISBN13: 9781522582410
- Book Edited / Compiled   -   1

22. Any Other Relevant Information
International Research Collaboration and publication with foreign professors with following in institutes:
- The University of Texas, MD Anderson Cancer Center, Texas, United States in 2022
- Visual Artificial Intelligence Laboratory Oxford Brookes University, UK in 2021
- Department of Electronic Engineering, Shantou University, China in 2018

Also, for more details about publications and profession, kindly follow the below link.
- ORCID :
  - https://orcid.org/0000-0001-5970-3702
- Scopus
  - https://www.scopus.com/authid/detail.uri?authorId=57277339500
- Google Scholar
  - https://scholar.google.com/citations?user=l9GG-tYAAAAJ&hl=en
- LinkedIn
  - https://www.linkedin.com/in/rajesh-kanna-baskaran-8449b611/
- Email ID(s) : brajeshkanna@gmail.com ; brajeshrgniyd@gmail.com

Appendix-A : Conference, Workshop, or Seminar Attended (from 2018 to March 2023)

<p style="text-align:center;color:blue;">Conference</p>

Conference	Details of Conference Organising Institution	Date
Paper Presentation	National conference Youth Advanced Computational Convergence (YACC2023) on the topic "Implications of artificial Intelligence in Indian public schemes" on March 22, 2023, organized by Rajiv Gandhi national Institute for youth development and Indian Council of Social Science Research	22/03/23
Session chair	RIACT 2022 : 3rd International Conference on Robotics, Intelligent Automation and Control Technologies, School of Mechanical Engineering, VIT Chennai in association with School of Computing Engineering and Digital Technologies, Teesside University (UK) and Department of Mechatronics and Mechanical Engineering, Bochum University of Applied Sciences (Germany)	25/09/22
Session chair	ICITSD-2022: 2nd International Conference on Innovative Technology for Sustainable Development in association with University of Technology Sydney & VIT Chennai, in Artificial Intelligence and Machine Learning track	27/01/22
Session chair	ICSDP 2022 : International Conference on Security and Data Privacy, organized by Department of Computer Science and Engineering, Sri Sivasubramaniya Nadar College of Engineering	14/12/22
Paper Presentation	CMASE 2021 :Conference on Mathematical Sciences and Applications in Engineering, presented on the topic "Dehaze Information Removal using Deep Learning Framework".	10/12/21
Member of a panel discussion	VCI4.0-2021: 2nd International Virtual Conference on Industry 4.0, School of Computer Science and Engineering, Vellore Institute of Technology Chennai and Manchester Metropolitan University, UK,	10/12/21
Paper Presentation	RIACT 2021 : 2nd International Conference on Robotics, Intelligent Automation and Control Technologies, presented on the topic Evaluating the efficiency of B-spline surface mapping for Online Indoor SLAM	20/09/21
Paper Presentation	IEEE 3rd Conference on Norbert Wiener in the 21st Century organized by Anna University Chennai, presented on the title Parallel FPFH SLAM for Aerial Vehicles	01/03/21
Member of a panel discussion	International Conference on Innovative Technology for sustainable development smart and sustainable Computing, VIT and University of Technology Sydney, Australia	28/01/21
Session chair	ICRTAC-2020 : 3rd International Conference on Recent Trends in International Advanced Computing" , VIT Chennai.	17/12/20
Paper Preparation	5th International Conference on Computer, International Communication and Signal Processing (ICCCSP), presented on the topic Parallel Exploitation of 2D LiDAR Simultaneous Localization and Mapping	24/05/21
Session chair	CoCoNet'20 : Fourth International Conference on Computing and Network Communications organized by Vellore Institute of Technology (VIT), Chennai	14/10/20

Appendix-A : Conference, Workshop, or Seminar Attended (from 2018 to March 2023)
Workshop / Faulty Development Program

Workshop	Details of Workshop/FDP Organising Institution	Date
Invited talk	IET, IIE and SIIC sponsored workshop, organized by the Department of Computational Intelligence, School of Computing, SRM Institute of Science & Technology, Chennai, presented on the topic "Towards Robust, Secure and Efficient Deep Learning	09/09/21
Invited talk	Workshop organized by Incubation & Technology Transfer Centre Mother Teresa Women's University, Kodaikanal, presented on the topic Image Analysis using Deep Learning,	10/03/21
Invited talk	ATAL, AICTE Sponsored Two Weeks Online Faculty Development Program(FDP) on "Deep learning in image and Computer Vision applications" organized by Department of Computer Science & Engineering Sri Krishna College of Technology, Coimbatore, presented on the topic Regularization techniques in Deep Learning	17/12/20
Invited talk	AICTE-ISTE sponsored workshop on Feature Analysis using Artificial Intelligence and Machine learning at Sri Krishna College of Engineering, Coimbatore presented on the topic Image authentication	19/12/20
Invited talk	AICTE-STTP sponsored, Zero-short learning by Convex Combination of semantic embeddings, Series I by Sri Krishna College of Engg & Tech. Coimbatore, presented on the topic Image authentication techniques using Deep Learning	06/11/20
Invited talk	AICTE Training and Learning (ATAL) sponsored 5-Days Online Faculty Development Programme on "Artificial Intelligence, Organized by Vellore Institute of Technology, Chennai, presented on the topic Deep learning - Regularization Techniques	24/09/20
Invited talk	AICTE-STTP on Zero-short learning by Convex Combination of semantic embeddings, Series II by Sri Krishna College of Engg & Tech., Coimbatore, presented on the topic Generalization error in Deep neural networks	21/10/20
Invited talk	AICTE ATAL sponsored Faculty Development Program on "Emerging Technologies of Fourth Industrial Revolution(4IR): A Practical Approach to Theoretical Conversion, presented on the topic Implementation of Machine Learning Algorithms using PyTorch	01/07/20
Invited talk	National workshop on Text Analytics and Optimization for Social Media Data with Hands-On Session by Dept. Software Engineering, SRM Institute of Science and Tech., Chennai, presented on the topic Text Analytics and Optimization for Social Media Data	20/02/20
Invited talk	9th World Engineering Education Forum (WEEF 2019) on Disruptive Engineering Education for Sustainable Development, presented on the topic Deep learning for Novice	17/12/19
Invited talk	TNSCST sponsored workshop, organized by St. Josephs Engg. College, Chennai, presented on the topic Role of AI & IoT for Health care	05/02/19
Invited talk	IET sponsored Short Term Training Programme, SRM, Chennai, presented on the topic Deep Neural Network Architecture & Transfer Learning,	08/02/19

Appendix-A : Conference, Workshop, or Seminar Attended (from 2018 to March 2023)

<div align="center">**Seminar / Webinar**</div>

Seminar	Details of Seminar / Webinar Organising Institution	Date
Key Note address	Artificial Intelligence Industry Concave, organized by School of Electronics Engineering, VIT Chennai on the topic Artificial Intelligence on the public welfare program and governance	31/03/23
Member of a panel discussion	Artificial Intelligence in Health care and medicine Industry Concave, organized by School of Electronics Engineering, VIT Chennai on the topic Artificial Intelligence in Health care and Medicine	31/03/23
Invited talk	Faculty Induction Program on the topic "Drone Technology", organized by the Academic Staff College, Vellore Institute of Technology, Chennai	30/06/22
Invited talk	Joint Webinar Series on Artificial Intelligence and International Machine Learning by Binghamton University, USA & VIT, India, presented on the title Image authentication techniques from the perspective of deep learning techniques	22/10/20
Invited talk	Techniques to Natural Language Processing, CSIR sponsored, One-Day National level Seminar, by Dr. N.G.P. Institute of Technology, Coimbatore, presented on the topic Applying Modern Deep Learning Techniques to Natural Language Processing	19/12/19