



JSS Mahavidyapeetha

JSS Academy of Technical Education

Dr. Vishnuvardhan Road, Srinivasapura post Bangalore 560060

www.Jssateb.ac.in



FACULTY PROFILE

Department: Computer Science & Engineering

1. Personal Details

NAME	Dr. PRADEEP H K	
DEPARTMENT	Computer Science & Engineering	
DESIGNATION	Associate Professor	
PHONE	+91 9738456263	
EMAIL ID	hkpradeep@jssateb.ac.in	
Date of Joining (JSSATEB)	19-01-2012	

2. Experience

Total Experience in Years	Teaching: 19 Years	Industry: 0.6 Years	Research: 11 Years
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3. Qualifications

COURSES	SPECIALIZATION	Year of Award	INSTITUTION	UNIVERSITY
B.E.	Computer Science & Engineering	2007	Nagarjuna College of Engineering & Technology, Bengaluru, Karnataka INDIA	Visvesvaraya Technological University, Belagavi, Karnataka, India
M.Tech.	Computer Science & Engineering	2010	Dr. Ambedkar Institute of Technology, Bengaluru, Karnataka INDIA	Visvesvaraya Technological University, Belagavi, Karnataka, India
Ph.D.	Computer Science & Engineering	2022	Visvesvaraya Technological University, RRC- Belagavi, Karnataka, India	Visvesvaraya Technological University, Belagavi, Karnataka, India

4. Research & Publications

Papers Published in Web of Science indexed Journals	International: 04	National: Nil
Papers Published in SCOPUS indexed Journals	International: 04	National: Nil
Papers Published in other Journals	International: 04	National: Nil
Papers Presented in Conferences / Symposium	International:06	National: 02
Book chapters Published	Name of the book: Advances in Intelligent Systems and Computing Publisher: Springer Nature Year of Publication:2020	

5. Research Guidance

PhD Guide? Give field & University	Artificial Intelligence & Digital Agriculture Compilers Technology	Visvesvaraya Technological University, Belagavi, Karnataka, India
PhDs / Projects Guided		Projects at Bachelor's Level: 25

6. Grants

i. Funds Received (Projects & FDPs)

SI No	Name of the Project	Name of the Principal Investigator/ Co-investigator	Year of Award	Amount Sanctioned	Duration of the project	Name of the Funding Agency
1.	Design of Climate Smart Agriculture (CSA) based Surface Irrigation System to Improve Water Productivity: A study of select area of Karnataka	<u>Principal Investigator:</u> - Dr. Pradweep H K, Associate Professor, CSE, JSSATEB <u>Co-investigators:</u> - Dr. Adinarayana Jagarlapudi, Professor, CSRE, IIT, Bombay - Dr. Karthikeyan Lanka, Assistant Professor, CSRE, IIT, Bombay - Dr. Deepak Singh, Scientist, ICAR-IISWC, Dehardun - Dr. S S Shirahatti, Professor & University HoD of Agricultural Engineering, University of Agricultural Sciences, Dharwad - Dr. Sreenatha M, Assistant Professor, CSE, JSSATEB	2023	Rs.14,50,000/-	2 years	ICSSR, New Delhi,
2.	IBM Generative AI Faculty Grant	<u>Principal Investigator:</u> Dr. Pradweep H K, Associate Professor, CSE, JSSATEB	2023	Rs.8,29,937/-	3 years	IBM, USA
3.	Ubiquitous precision crop management using agricultural IoT and UAV	<u>Principal Investigator:</u> Dr. Arvind, Professor, ECE, JSSATEB <u>Co-investigators:</u> Dr. Prabhudev Jagadeesh M.P, Professor, CSE, JSSATEB Dr. Pradweep H K, Associate Professor, CSE, JSSATEB	2022	Rs. 10,00,000/-	2 Years	VTU, Belagavi, Karnataka

4.	UK-India AIXcelerate Programme	Dr. Pradireep H K, Associate Professor, CSE, JSSATEB		International Travel grant for 6 team members. AWS Credits	8 Months	UK-India Joint Government Initiative
5.	Advancements in Semiconductors, System Software and AI for Digital Agriculture	<u>Principal Investigator:</u> Dr. Pradireep H K, Associate Professor, CSE, JSSATEB	2025	Rs. 6,00,000	2 weeks	AICTE, New Delhi ATAL FDP
6.	Internet of Things (IoT) and Drone Technology Applications in Digital Agriculture	<u>Principal Investigator:</u> - Dr. Pradireep H K, Associate Professor, CSE, JSSATEB <u>Co-investigator:</u> - Dr. S R Desai, Professor, University of Agricultural Sciences, Dharwad	2023	Rs. 3,50,000/-	06 Days FDP	AICTE, New Delhi ATAL FDP
7.	Artificial Intelligence & Machine Learning Techniques for Precision Agriculture	<u>Principal Investigator:</u> - Dr. Prabhudev Jagadeesh M.P, Professor, CSE, JSSATEB <u>Co-investigators:</u> - Dr. Pradireep H K, Associate Professor, CSE, JSSATEB	2022	Rs. 3,00,000/-	15 Days FDP	AICTE, New Delhi ATAL FDP

ii. Patents

Sl.no	Patent Application number	Date of filing	Invention titled	Patent Filed in the Name	Inventors	Status
1	202241052305	13-09-2022	CONTEXTLESS GRAMMAR-BASED SYSTEM FOR SOIL TEXTURE CLASSIFICATION	JSS ACADEMY OF TECHNICAL EDUCATION, Bengaluru	Pradeep H K, Archana, B.K, Dr. K. Rajan, Dr. Madhu, M.	RQ Filed

7. Awards / Recognitions

1.	IBM Generative AI Faculty Award
2.	Invited for British High Commissioner's Residence with some of the UK's most senior leaders, including Deputy Prime Minister David Lammy, the UK Minister for AI, and other high-profile Special Guests.
3.	Selected to present an AI-based prototype at the AI Impact India Summit held at Bharat Mandapam, New Delhi, a premier global event attended by delegates from over 100 countries.
4.	Selected among the Top 5 projects under the UK-India AIxcelerate Research Programme for collaborative research and innovation.
5.	CERTIFICATE OF ACHIEVEMENT received from ICAR - IARI, Ministry of Agriculture & Farmers' Welfare, Govt. of India.
6.	Successfully completed an Industry Research Fellowship at Thales Group, a reputed multinational corporation (MNC), in the Research & Technology Innovation (RT&I) Department, contributing to advanced research and development in LLVM compiler technologies and RISC-V architecture.
7.	A software product is developed for soil texture classification and it's certified by ICAR-Indian Institute of Soil & Water Conservation (IISWC), Ministry of Agriculture, Govt. of India, Research Center, Sunabeda, Koraput, Odisha, India.
8.	Recognized as Reviewer for SCI indexed Elsevier, wiley & Springer Journals.

8. Publications

i. International Journals

Sl. No.	Title of the Paper	Name(s) of Author(s)	Name of the Journal	Volume No. Issue No. & Year	WOS / Scopus / Both	Impact Factor	Publisher
1	Cognitive Computing Models for Estimation of Reference Evapotranspiration: A Review.	Pradeep HK, Balasangameshwara J, Sheshshayee MS, Desai S, Archana BK	Cognitive Systems Research.	Volume No. 70 Issue No. & Year : December 2021	WOS & SCOPUS	3.9	Elsevier
2	Irrigation Practices and Soft Computing Applications: A Review	Pradeep H K, Jasma Balasangameshwara, M.S. Sheshshayee, K. Rajan	Statistics and Applications	Volume No. 19 Issue No. 2 Year : 2021	WOS	-	Society of Statistics, Computer and Applications
3	Automation of USDA Triangle Soil Texture Classification Using Finite State Machine: A Novel Conceptual Modeling Approach	Pradeep H K, Jasma Balasangameshwara, K. Rajan, Madhu, M., Archana, B.K	Statistics and Applications	Volume No. 19 Issue No. 2 Year : 2021	WOS	-	Society of Statistics, Computer and Applications

4	Soft Computing based DECEL Model for Optimization of Water Usage in Irrigation Management	Pradeep H K, Jasma Balasangameshwara, K. Rajan, Archana, B.K	Statistics and Applications	Volume No. 20 Issue No. 2 Year : 2022	WOS	-	Society of Statistics, Computer and Applications
5	Soil Moisture Based Automatic Irrigation System to Improve Water Productivity	Pradeep H K , Jasma Balasangameshwara , K Rajan , Prabhudev Jagadeesh	Journal of AgriSearch	7 (4), 2020	-	-	Journal of AgriSearch
6	An innovative Approach for city bus location with Route Navigation System using Android	Ravi P , Rohitaksha K , Abhilash C B and Pradeep H K	European Journal of Advances in Engineering and Technology	2(3), 2015.	-	-	European Journal of Advances in Engineering And Technology
7	An Email based offline Download Manager for Large Distributed File using Hadoop Map Reduce Framework	Pradeep H K, Rohitaksha K, Abhilash C B	SSRG International Journal of Computer Science and Engineering (SSRG-IJCSE)	1(10), 2014	-	-	SSRG International Journal of Computer Science and Engineering
8	A Novel Approach of New Hybrid Cloud	Abhilash C B, Rohitaksha K, Niranjana C K, Pradeep H K	The International Journal of Computer Trends and Technology	5(3), 2013	-	-	The International Journal of Computer Trends and Technology

ii. Conferences

Sl. No.	Title of the paper	Name(s) of Author(s)	Name of the Journal	WOS / Scopus	Publisher
1	Irrigation System Automation using Finite State Machine Model and Machine Learning Techniques	Pradeep H K Prabhudev Jagadeesh M. S. Sheshshaye e Desai Sujeet	International Conference on Intelligent Computing and Communication-2019	WOS & Scopus	Springer Nature
2	A machine learning approach for agricultural water management to balance the effect of climate changes	Pradeep H K M. S. Sheshshaye e Desai Sujeet	Water Future International Conference 2019		IISc, Bangalore
3	Design of Enterprise-Grade Climate-Resilient AI Models using IBM watsonx for Reference Evapotranspiration Prediction	Pradeep H K	International Conference, SANKET		Organized by IIT Bombay & IIT Kanpur , 2025

iii. **Workshops /Conferences Attended**

Sl. No.	Name of the workshop / Conference	Organizer	Date
1	Remote Sensing Applications in Agricultural Water Management	IIRS - ISRO, Dept. of Space, Govt. of India, Dehradun, India	3 rd to 7 th August, 2020.
2	Machine Intelligence & Brain Research	IIT- Madras, India	2 nd to 10 th January, 2020
3	“Extension Approaches for Water Management”	National Institute of Agriculture Extension Management (MANAGE), Hyderabad, India.	8 th to 11 th January, 2018
4	Teacher effectiveness: Nurturing your well-being	IIT –Hyderabad, India	1st and 2 nd , May, 2015
5	Research methods using structural equation modeling	NIT- Calicut, India	25 th and 26 th April 2014.
6	Project Management Concepts	Cognizant- Bengaluru, India	April 27 th and 28 th 2012
7	High impact teaching skills- Mission 10X	Wipro-Bengaluru, India	18 th to 22 nd April 2011

iv. **Conference Attended (those sponsored by AICTE / ISTE/IETE/TEQIP or any other sponsoring body)**

Sl. No.	Name of the workshop / Conference	Organizer	Date
1	Machine Learning & its Applications	IIT-Roorkee, India	9 th to 13 th July, 2018

9. **Details of IBM courses completed**

Sl no.	IBM Certificate courses completed & Badges Earned
1.	IBM Artificial Intelligence Practitioner Certificate
2.	Building AI Solutions Using Advanced Algorithms and Open Source Frameworks
3.	Getting Started with Enterprise-grade AI
4.	Artificial Intelligence Fundamentals
5.	Getting Started with Enterprise Data Science

10. Membership of Professional Bodies:

RISC-V

11. Any other information you will like to share about your professional experience

Sl. No.	Recognition	Activity / Organization	Year
1	Invited for British High Commissioner's Residence with some of the UK's most senior leaders, including Deputy Prime Minister David Lammy, the UK Minister for AI, and other high-profile Special Guests.	"Shaping Tomorrow – UK AI Showcase & Reception"	2026
2	Selected for India-UK Joint project	Presented at India AI Impact Summit 2026	2026
3	Certificate of Achievement for AI Models Development to Improve Water Productivity in Irrigation	ICAR-IARI, Minister of Agriculture & Farmers Welfare, Govt. of India	2021
4	Developed Software Product for Soil Texture Classification	Certified as Novel & Beneficial by ICAR-IISWC, Minister of Agriculture Govt. of India	2021
5	Invited for International Conference Special Session on "Role of Science Diplomacy in Addressing Global Water Challenges"	Indian Institute of Science, Bengaluru	2019
6	Curriculum Design Contributor (M.Tech Data Science & B.Tech CS & Spatial Analytics)	Visvesvaraya Technological University, Belagavi	2022
7	Established Precision Agriculture Research Lab	JSSATE, Bengaluru	2021
8	Established Center of Excellence on AI & Compilers Technologies	JSSATE, Bengaluru	2025
9	MoU Established with UAS, Dharwad	UAS, Dharwad	2023
10	Skills Build Agreement	IBM	2023
11	IBM Certified AI Practitioner	IBM, USA	2023
12	Hosted Expert Talks by International Faculty	Rutgers University, USA; University of Central Florida, USA	2023–2025
13	Distinguished Resource Person – National Workshop on Climate Resilient FLW Systems	ICAR-IISWC	2025
14	Resource Person & Stakeholder – Water Productivity	ACIWRM, Govt. of Karnataka	2025
15	Resource Person – AICTE ATAL FDPs	AICTE	2022-25
16	Reviewer for SCI Indexed Journals	Wiley, Elsevier, Springer	2019–2025
17	Successfully designed & delivered add-on courses, providing students with hands-on exposure to enterprise-grade AI tool chains.	In collaboration with IBM	2025
18	Training Programs Attended in premier organizations & Industry	Attended various training programs on artificial intelligence and other research topics at premier organizations, such as IISc – Bengaluru, IIT- Madras, IIT- Roorkee, IIT-Hyderabad, IIT-Kanpur, IIRS & ISRO – Dharwad, IIIT- Dharwad, NIT- Calicut, NIT- Patna, IIIT- Hyderabad, MANAGE-Hyderabad, Wipro, IBM and Cognizant	

Activities hosted under IBM Skills Build program:

Sl. No.	Event Title	Department / Participants	Sem	Resource Person	Date(s)	Total No. Of Participants
1	AI + Sustainability Job Readiness Training	CSE CSE(AI&ML) / ISE / ECE / E&I	VI	Rahul Moorjan & Team, IBM & 1M1B	17 Mar 2025	210
2	AI Certification Program (IBM + EY–1M1B)	CSE	III	Sneha Sri Divya, Shabeea, IBM & 1M1B	28 Oct 2025	180
3	AI Certification Program (IBM + EY–1M1B)	CSE	I	Sneha Sri Divya, Shabeea, IBM & 1M1B	28 Oct 2025	105
4	AI Certification Program (IBM + EY–1M1B)	CSE	V	Sneha Sri Divya, Shabeea, IBM & 1M1B	28 Oct 2025	176
5	Cybersecurity Fundamentals Session	CSE	III & V	IBM Cybersecurity Wise Team	29 Oct 2025	150
6	ACM India Council Interaction	Faculty	All	Ms. Maria Choudhary, Principal Member of Technical Staff, Oracle	27 Jun 2025	90
7	From Formal Verification	All Departments	All	Dr. Santosh Nagarakatte, Professor, Rutgers University	30 Jul 2025	100
8	Climate Change, AI & IBM Watsonx	CSE	V & VII	Dr. Pennan Chinnasamy, IIT Bombay	9 Sep 2025	173
9	Climate Change, AI & IBM Watsonx	CSE	III	Dr. Adinarayana	11 Sep 2025	170
10	Climate Change, AI & IBM Watsonx	CSE	V & VII	Dr. B. Krishna Rao, Principal Scientist & Head, ICAR–IISWC	15 Sep 2025	70
11	Add-On Course: Applied Machine Learning with IBM Watsonx	CSE	VII	Dr. Pradeep H K	22 May – 06 Jun 2025	70
12	Research Internship for Students from IISWC	E&IE	VII	Dr. Pradeep H K in collaboration with ICAR-IISWC Scientists	June 2025 & March 2026	03

Summary of National & International Research Collaborations:

Sl.no	Name	Organization	Designation	Remarks
1.	Dr. Madhu M	IISWC, Dehradun	Director & Principal Scientist	Patent & Joint Publications
2.	Dr. J. Adinarayana	IIT Bombay	Professor	Research Project Collaborations & Joint Publications
3.	Dr. Karthikeyan Lanka	IIT Bombay	Associate Professor	Research Project Collaboration
4.	Dr. Pennan Chinnasamy,	IIT Bombay	Associate Professor	UK-India Research Programme / NEP
	Dr. Sheshshayee S	UAS, Bengaluru	Professor	Joint Publications
	Dr. Thimme gowda M.N.	UAS, Bengaluru	Professor and Head	AICTE FDP Collaboration
5.	Dr. B. Krishna Rao	IISWC, Bellary	Head & Principal Scientist	Students Research Internship & Project Collaboration
6.	Dr. K Rajan	IISWC, Ooty	Principal Scientist	Patent & Joint Publications
7.	Dr. Deepak Singh	IISWC, Dehradun	Scientist	Research Project Collaboration
8.	Dr. Sujeet Desai	CCARI, Goa	Scientist	Project & Joint Publications
9.	Ms. Jo Ann H. Hill	IBM, USA	Developer Advocate Leader	IBM Generative AI Grant
10.	Mr. Krishna Kanth	IBM, India	Program Manager	IBM Generative AI Grant
11.	Dr. Subhra Kanti Das	Thales	Head R&D	Industry research Fellowship
12.	Mrs. Vidya	BlackFig Technologies	Project Manager	Students Internship & Compilers Tools
13.	Dr. M. S. Shirahatti	UAS, Dharwad	Associate Research Director	Research Project Collaborations
14.	Dr. S R Desai	UAS, Dharwad	Professor	AICTE FDP Collaboration

Details of MoU / Agreement/ COE/ R&D Labs Established:

No.	Major Initiatives	Date of signing & validity period	Remarks
1	MoU has signed between JSSATEB & University of Agricultural Sciences (UAS), Dharwad	03.08.2023 & Five Years	Executed Joint funded research projects & AICTE-ATAL FDP
2	Agreement has signed between JSSATEB & IBM	07. 02. 2023	Developed Enterprise grade AI Models for climate forecasting & published Trained over 1000 students on AI technologies
3	Established Precision Agriculture Research & Development Lab	Dec, 2021	Joint Publications with premier institutes, projects executed, FDPs, UG Projects

Established Center of Excellence in AI & Compiler Technology - List of Activities:

Sl. No.	Activity	Collaboration / Participants	Duration	Remarks
1.	AICTE - ADVANCED ATAL FDP: Advancements in Semiconductors, System Software and AI for Digital Agriculture	UAS Bengaluru; 60 faculty members from various regions of India	8th Sep 2025 to 20th Sep 2025	Awardee: Dr. Pradeep H K Received ₹6,00,000 AICTE funding and successfully executed the program.
2.	Developed AI prototype under UK-INDIA AI AIXcelerate Program & Selected for presentation at India AI Impact Summit 2026, New Delhi	IISc, Bengaluru	Sep 2025 to Feb 2026	Awardee: Dr. Pradeep H K & Team Selected for AI Technology interactions with some of the UK's most senior leaders, including Deputy Prime Minister David Lammy, the UK Minister for AI, and other high-profile Special Guests.
3.	Design of Enterprise-Grade Climate-Resilient AI Models Using IBM watsonx for Reference Evapotranspiration	IISWC Bellary & UHS Bagalkote		Dr. Pradeep H K Presented a Paper at Conference Organized by IIT Bombay
4.	LLVM Capstone Project Development	40 CSE students, JSSATE Bengaluru	Sep-2025 – Present	Guided by Dr. Pradeep H K. Industry-oriented LLVM compiler & AI projects
5.	Designed & Executed, Add on course with capstone project development on "AI & Parallel Programming with IBM Watsonx	140 CSE students, JSSATE Bengaluru	Sep 2025 to Dec 2025	Delivered By Dr.Pradeep H K
6.	Delivered Expert Lecture at National event, Organized by ICAR–IISWC	100 Participants	13th Aug 2025	Selected as Distinguished Resource Person for Workshop on Climate Resilient FLW Systems, Govt. of India Initiative
7.	Delivered Expert Lecture In Symposium of Govt. of Karnataka Initiative	120 Participants	12th Nov 2025	Resource Person & Stakeholder for Water Productivity Symposium, ACIWRM, Govt.of Karnataka
8.	AI SkillsBuild Program	460 CSE students, JSSATE Bengaluru; IBM & 1M1B	28th Oct 2025	Industry experts delivered hands-on AI sessions.
9.	Cybersecurity SkillsBuild Program	150 CSE students, JSSATE Bengaluru; IBM	29th Oct 2025	Hands-on cybersecurity training conducted by industry experts.
10.	Climate Change, AI & IBM Watsonx	410 CSE students, JSSATE	9th , 11th & 15th Sep 2025	Sessions delivered by professors and scientists.
11.	Initiated Industry Internship Program	Black Fig Technology	Ongoing	Students gaining practical industry experience.
12.	Research Internship Program	4 E&I students in collaboration with IISWC, Bellary	Sep 2025 to April 2026	Developed AI and IoT- research project.

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