

Dr. ARUN KUMAR HIREMATH

Associate Professor,
CSE Department, BIET

Address:

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Objective

To be a dynamic center of innovation, research, and teaching, promoting lifelong learning, professionalism, and creativity to drive departmental and institutional advancement.

Academic Profile

Visvesvaraya Technological University, Belagavi

2021

Doctor of Philosophy (Ph.D), Computer Science & Engineering. Research titled “**Optimized Data Mining and Machine Learning Techniques for Spatial Outlier Detection and Removal in Precision Agriculture**”, Research Centre: Department of Computer Science & Engineering, Bapuji Institute of Engineering & Technology, Davangere.

- Provisional Degree awarded on **30/10/2021**
- Degree awarded on **10/03/2022** (during 21st Annual convocation held at VTU, Belagavi).
- The Research work has been carried out with grants under **VGST K-FIST L2** (GRD:338).

Visvesvaraya Technological University, Belagavi

2013

Master of Technology (M.Tech), Computer Science and Engineering, Bapuji Institute of Engineering and Technology, Davanagere.

Visvesvaraya Technological University, Belagavi

2010

Bachelor of Engineering (B.E), Information Science and Engineering, Tontadarya College of Engineering, Gadag.

Teaching Experience (Total 11.3 years)

Associate Professor

Department of Computer Science, Bapuji Institute of Engineering & Technology, Davangere, from **August 2022-till date**.

Assistant Professor

Department of Computer Science, Bapuji Institute of Engineering & Technology, Davangere, from **January 2014 to July 2022**.

Assistant Professor

Department of Computer Science, M.S. Bidve College of Engineering, Latur from **Aug -2013 to Jan-2014**.

Lecturer

Department of Computer Science, Margdarshan Institute of Technology (MIT), Ilkal from **Sept-2010** to **Jan-2011**.

Roles @ BIET

- Department Quality Assurance Cell (D.Q.A.C) Coordinator
- Working as a NBA Criteria 5 Team Head
- NIRF and IIRF Coordinator (Institute level)
- Final year Students Project and Mini project Coordinator and Internship Coordinator
- Worked as a NBA Criteria 6 Team Head
- Worked for NAAC in Preparing Research Center facilities related files
- BIETECH VOICE-Coordinator (Department level)
- In-charge of Cyber Security incubation center - Department level
- Coordinator for GitHub Campus Program
- Involved as a Team Member of QPDS for the year 2022-23.
- Involved in Organizing the KSCST- Project Exhibition.
- Involved as a Team Member for Scheduling the Practical Examination Time Table (BOE).

Career Highlights /Achievements

- Recognized as a Ph.D / Research supervisor under VTU, Belagavi, effective from 2023-24.
- Involved as a research paper reviewer for the
 - 3rd IEEE International conference on Distributed Computing and Electrical Circuits and Electronics (ICDCECE-2024) organized by IEEE SB Ballary Institute of Technology and Management, Ballary on 26-27 April 2024.
 - International Conference on Distributed Computing and optimization Techniques (ICDCOT-2024) organized by SJB Institute of Technology, Bengaluru, on 15th and 16th March 2024.
 - First IEEE International Conference on Integrated Intelligence and Communication Systems (ICIICS-2023) organized by Sharnbasva University,Kalaburagi, on 24-25, November 2023.
 - IEEE First International Conference on Ambient Intelligence, Knowledge Informatics and Industrial Electronics (AIKIIE-2023) on 02 & 03 November 2023.
- Applied and published 3 patents (National).
- Working as a mentor for the student project proposal titled “Depression Detection and Remedial recommendation System using Machine Learning Techniques” with grants of Rs.3.0 lakhs under New Age Incubation Network, Govt. of Karnataka Initiative.
- Guided more than 20 projects for UG students.
- Guided a project “MISSING PERSON DETECTION USING AI” funded by KSCST-2020.
- Received Certificate of Appreciation for Adopting Impartus Lecture Capture and being the

Part of the Digital Revolution in Education.

Professional Memberships

- The Indian Society for Technical Education - LM 125350
- Institute of Engineers – AM1916133
- The Computer Science Teachers Association (CSTA)
- International Association of Engineers

Research Area of Interests

- Data Mining, Data Science, Machine Learning and Artificial Intelligence

List of Publications

- Dr. Arun Kumar Hiremath, Dr. Naveen Kumar K R, “**Advances and Challenges in Spatial Multivariate Outlier Detection: A Comprehensive Analysis of Existing Methods**”, Technische Sicherheit, ISSN NO: 1434-9728, Volume 23, Issue 12, December 2023, Page No: 128-142. **Scopus-Ranked Q4 in SJR.**
- Dr. Naveen Kumar K R, Dr. Arun Kumar G H, “**Optimization of Crop Recommendations Using Novel Machine Learning Techniques**”, MDPI, Sustainability 15(11), 8836; <https://doi.org/10.3390/su15118836>, May-2023, (**Web of Science**), **Ranked Q1 in SJR.**
- Dr. Arun Kumar Hiremath, Dr. Nirmala C R, “**Overview, Category and Ontology of Assistive devices**” for the book “**Computer Assistive Technologies for Physically and Cognitively Challenged Users**”, Advances in Data Science-Driven Technologies, 2023, 1-25 (volume-2), ISSN (online)-2972-3450- **Bentham Science (Scopus).**
- Dr. Naveen Kumar K R, Dr. Arun Kumar G H, “**A Novel Cluster Analysis-Based Crop Dataset Recommendation Method in Precision Farming**”, Computer Systems Science & Engineering Tech Science Press, DOI: 10.32604/csse.2023.036629, Vol.46, No.3, April 2023 (**Web of Science**), **Ranked Q3 in SJR.**
- Dr. Arun Kumar Hiremath, Dr. Pradeep N, “**Emotional and Social intelligence with decision making paradigms for Industry 4.0**” for the book “**Industry 4.0 and People analytics - A Technical perspective of HRM**” - AAP - **CRC Press - Taylor & Francis Group, USA - 2023.**
- Dr. Arun Kumar Hiremath, Dr. Naveen Kumar K R, “**Blockchain Foundations and Methods**” for the book “**Blockchain Technology and its Potential Applications**” - **CRC Press - Taylor & Francis Group, USA - 2023.**
- Dr. Arun Kumar Hiremath, Dr. Roopa G M, “**A Secure Blockchain-Powered Land Record Modernization System for Documenting Land User's Rights: Land Transparency**”

Initiative” for **Blockchain Technologies and Applications for Digital Governance**, DOI: 10.4018/978-1-7998-8493-4. IGI Global Publishers (**SCOPUS Indexed**).

- Dr. Sreenivasa B R, Dr. Arun Kumar G H, “**Business Setup Recommendation Scenario in E-Commerce Applications**”, International Journal of All Research Education and Scientific Methods (IJARESM), ISSN: 2455-6211, Volume 10, Issue 2, February-2022.
- Dr. Roopa G M, Arun Kumar Hiremath, “**AGRO-CHAIN: Blockchain Powered Micro-Financial Assistance for Farmers**” for **Applications of Blockchain and Big IoT Systems : Digital Solutions for Diverse Industries**, Volume 1, CRC Press, *Taylor & Francis Group*, 2022, DOI:<https://doi.org/10.1201/9781003231332>.
- Arun Kumar Hiremath, Dr.Nirmala C R, “**An Entropy Based Method for Outlier Detection and Removal in the Agriculture Data**”, International Journal of All Research Education and Scientific Methods, Volume 8, Pages 1155-1161, 2021.
- Dr. Roopa G M, Arun Kumar Hiremath,“**Optimized Data Mining Techniques for Outlier Detection, Removal, and Management Zone Delineation for Yield Prediction**”, **Modern Techniques for Agricultural Disease Management and Crop Yield Prediction**, Pages 222-258 DOI:10.4018/978-1-5225-9632-5.ch010 (**SCOPUS Indexed**), 2019.
- Arun Kumar Hiremath, Dr. Nirmala C R, “**Outlier Detection and Removal with Spatial Algorithm in Agriculture Data for Davangere Region**”, International Conference on Recent Multidisciplinary Research ICRMR-2018.
- Arun Kumar Hiremath, Dr. Nirmala C R, “**Intelligent Virtual Assistant Using Ibm Bluemix And Watson Services**”, International Journal of Engineering and Manufacturing Science, (NCRAECE), Volume 8, Pages 13-21, 2018.

Research Papers to be Published

- A Paper titled “**Assertion of Soil Data Consistency by Detecting and Removing Spatial Outliers Using Iterative Techniques for Precision Agriculture**” is under publication consideration by IJATEE (**Scopus indexed,Q4**), (Paper ID: IJATEE.2021.875659).
- A Paper titled “**Entropy-based Outlier Detection for Improved Decision making in Precision Agriculture: A Case Study on Optimized Soil Data Analysis**”, is communicated to the journal titled “Computers,Materials & Continua”,(Application of Graph Theory Concepts in Computer Networks).
- A Paper titled "**Enhancing Outlier Detection in Soil Data for Precision Agriculture Using a Weighted Entropy Approach Based on Relative Importance of Soil Properties**", is Communicated to the journal titled “Information Processing in Agriculture (IPA)” and is currently under review.

Patents

- **“Artificial Intelligence Based Smart Watch to Diagnose Parkinson's Disease using Efficient Gait Analysis”** (Application Number: 202341000248A; Filing Date:03/01/2023; Publication Date: 06/01/2023;Type-National)
- **“Intelligent Wearable Brain machine interface to assist paralyzed people”** (Application No-202241011680A: Filing Date : 03/03/2022: Publication Date: 18/03/2022: Type-National)
- **“Artificial Intelligence Based Internet of Vehicles (IoV) System to Prevent Road Accidents”** (Application No-202141011709:Filing-Date-19/3/2021:Published-Date-26/3/21: Type-National)

Subjects Handled

- Artificial Intelligence and Machine Learning, Web Technology and Its Applications, Computer Networks, Data Communication, Operating Systems, Programming in C and Data structures, Software Engineering, Data Mining, Web Programming, Advanced Java and J2EE.

Workshops Organized

- Involved in Organizing 5 days FDP on “Microsoft Azure AI Engineer Associate” in association with ICT Academy,ISTE from 28th August to 1st September, 2023.
- Active participation in organizing and hosting the department forum activities.
- Organized an “Internal Hackathon for Mathan-2023” in the month of Jan 2023 at Institute Level.
- Organized Three days Workshop on “Artificial Intelligence and Machine Learning” in the month of Jan 2023.
- Organized a one day workshop on “TECH-O-NET” on 13th Jan 2023.
- Organized Five Days Faculty Development Program On “Microsoft Power BI Data Analyst Associate” in association with ICT Academy from 10th October to 14th October 2022.
- Organized an “Internal Hackathon“ for MANTHAN - 2021 at Institute Level.
- Hosted “Technology Barrier Reduction Program” organized by Zebra Technologies, Bangalore in association with KRVP, ISTE,YRCW at BIET in April 2019.
- Delivered an invited lecture on Operating System (File Management) at BCA College, Davangere.

Workshops Attended

- Participated in AICTE Training And Learning (ATAL) Academy Faculty Development Program on Agile Software Evolution and Microservices Mastery at BIET from 16/10/2023 to 21/10/2023.
- Attended a one week In-house Faculty Development Program on “Google Analytics and Tools for Data visualization”, organized by the Dept of CSE, BIET from 24th to 31st July,2023.
- Attended the Seminar on "Best Practices for New Education Policy (NEP)-2020 in Higher Education Institutions" Sponsored by NAAC on 21st February 2023
- Attended regional workshop on “Interface of IPR in academics and Entrepreneurship” organized by KSCST-IISC, Bengaluru in association with BIET, Davanagere on 2nd and 3rd march, 2023.
- Attended Faculty Enablement Program (FEP) on Artificial Intelligence offered by Infosys Springboard platform from Nov 14th - 18th 2022.
- Attended Faculty Enablement Program (FEP) on Java Programming offered by Infosys Springboard platform from June 20th - June 25th 2022.
- Attended the AICTE Sponsored 6 Day Online Short Term Training Programme on Block chain Technology and Its Applications, organized by East West Institute of Technology, Bangalore, from Nov 09 to 14, 2020.
- Attended AICTE Sponsored one week Faculty Development Program on Modern trends in AI and Machine Learning, 11th to 16th January 2021.
- Attended Awareness Workshop–NIRF India Rankings–2021 for Higher Educational Institutions organized by Institute for Academic excellence in collaboration with collegiate Education & Technical education dept, Govt of Telangana on 18th-19th January 2021.
- Attended One week online FDP on “Trends in Data Science” from 10th-Aug-2020 to 14th-Aug-2020, Organized by MCA Dept, JNNCE, Shivamogga.
- Participated in the 5 Days Faculty Development Program on “Data Science and Big Data Analytics” conducted by ICT Academy from 21st January to 25th January 2020.
- Attended a one day workshop on “IOT IN AGRICULTURE: KARNATAKA FOCUS” organized by Vision Group of Science and Technology on 17th August, 2019, Indian Institute of Science Campus, Bangalore.
- Actively Participated in Industry Workshop on “Machine Learning to Deep Learning”

organized by Dept of CSE, BIET in association with BCIC, Bangalore on 23-Feb-2019.

- Actively involved in organizing 2-Day Bootcamp and 24 hrs Hackathon on “Building Chatbots using IBM-Watson” organized by SmartBridge in collaboration with IBM held at BIET, during the 11th, 12th and 13th October 2018.
- Actively Involved in Organizing 24 hrs Non- Stop “LEARNATHON - Student Championship 2018” Conducted by Salesforce & ICT Academy Hosted by the Department of Computer Science & Engineering during 2nd and 3rd Feb 2018.
- Attended 2-Days National Seminar on “Data Science and Analytics” organized by the Dept of Computer Applications, PES University, Bangalore on 10th - 11th Nov, 2017.
- Participated in the Faculty Development Programme on “Smart Living- Opportunities and Challenges (IoT)” held on 10th Feb 2017 at TCS, Bangalore.
- Participated in a One week ISTE Approved Workshop on “Recent Research Trends in Information Technology” organized by Dept. of IT, MPSTME (Mumbai Campus) from 13th-17th July 2015.
- Participated in the International conference on “Applied & Theoretical Computing & Communication technology (iCATccT -2015)” held at BIET, Davangere on 29-31 October 2015.

Research Plan

- To guide enthusiastic research aspirants within my area of interest/s.
- To publish journal articles in reputed indexed Q1/Q2/Q3/Q4 Journal (Writing research articles in the research area scope).
- To get research grants from funding agencies like AICTE/DST/VGST and other funding agencies. (working on proposal writing and other related activities).
- About to submit a Research proposal to VGST - KFIST L2 - 2024.
- Planned to submit a proposal to organize ATAL FDP for the year 2024.



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