Dr. ARUN KUMAR HIREMATH

Associate Professor,
CSE Department, BIET

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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** (21st Annual convocation held at VTU, Belagavi).
- The Research work has been carried out under **VGST K-FIST L2 grants** (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 10 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
- NIRF and IIRF Coordinator (Institute level)
- Final year Students Project Coordinator and Internship Coordinator
- 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

Additional Responsibilities

- 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.
- Involved as a Team Member of QPDS for the year 2022.
- Organized an "Internal Hackathon" for MANTHAN - 2021 at Institute Level.
- Hosted "Technology Barrier Reduction Program" organized by Zebra Technologies, Banglore in association with KRVP, ISTE,YRCW at BIET in April 2019.
- Involved in Organizing the KSCST- Project Exhibition - 2018.
- Delivered an invited lecture on Operating System (File Management) at BCA College, Davangere.
- Involved as a Team Member for Scheduling the Practical Examination Time Table (BOE).

Professional Memberships

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

- International Association of Engineers

Career Highlights /Achievements

- Recognized as Ph.D / Research supervisor under VTU, Belagavi, effective from 2023-24.
- Involved as a research paper reviewer for the 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 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.

Research Area of Interests

- Data Mining, Machine Learning and Artificial Intelligence

List of Publications

- 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 "**Advances and Challenges in Spatial Multivariate Outlier Detection: A Comprehensive Analysis of Existing Methods**"**,** is Communicated to the journal titled "Information Processing in Agriculture (IPA)" (Manuscript ID:IPA-D-23-00156).

- 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

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

Workshops Attended

- 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.

- Participated in 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.

- Participated in 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 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).

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