# Dr. Divya Prakash Shrivastava

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## Summary:

- Accomplished senior educator with extensive expertise in teaching, innovative software development, and pioneering new instructional methodologies to deliver high-quality, technology-enhanced education. Adept at fostering collaborative learning through modern technologies and creative brainstorming strategies.
- Dedicated, student-centered professional skilled in enhancing student success by designing and implementing forward-thinking systems and processes that deliver impactful value and elevate educational outcomes.
- Experienced in leveraging the **Problem-Based Learning (PBL)** model to address evolving societal and educational needs, fostering critical thinking and problem-solving skills.
- Credentialed with advanced technical certifications, including ITIL, Cloud Computing, Microsoft Technologies, R, and Big Data, demonstrating a strong foundation in cutting-edge technologies and their applications.
- Proficient in designing innovative projects with a unique focus on **Human-Computer Interaction (HCI)**, emphasizing intuitive user experiences and delivering visually compelling graphic designs with meticulous attention to detail.
- Comprehensive understanding of the social, cultural, ethical, and legal dimensions of education and software design; well-versed in identifying, analyzing, and addressing complex challenges within diverse technological and cultural frameworks.

## Patent Published:

- **APPARATUS AND METHOD FOR REAL TIME NAVIGATION ASSISTANCE** - Issued on June 6, 2020, with Patent Number 202011022812.
  - **Invention Overview**: This invention pertains to the field of maps and navigation systems, specifically focusing on an innovative apparatus and method for providing real-time navigation assistance on roads using the probe-slicing technique. This method aims to enhance the accuracy and efficiency of navigation systems by dynamically analyzing traffic and road conditions in real-time.
- **Human Coronavirus: INTELLIGENT PROCESS TO DETECTING SEVERE ACUTE RESPIRATORY SYNDROME CORONAVIRUS** (SARS CoV, HCoV-OC43, HKU1, 229E, NL63) - **Issued on June 6, 2020, with Patent Number** 202011016343
  - **Invention Overview:** The invention titled "Human Coronavirus" focuses on enhanced methods for detecting the SARS (severe acute respiratory syndrome) virus. It introduces novel and optimized primers and probes designed for the amplification and detection of SARS nucleic acid, offering an improved approach for accurate and efficient detection of the virus. This innovation aims to advance diagnostic capabilities for SARS and potentially other coronaviruses.

## Research paper Publication:

- Artificial Intelligence in Education: An Argument of Chat-GPT Use in Education, IEEE, 24 July 2023, DOI: 10.1109/ITT59889.2023.10184267.
- Adaptive Methodologies for Tenders as a Thrust for Emerging Startups, IEEE, 24 July 2023, DOI: 10.1109 / ITT59889.2023.10184249.
- Suppression of Gaussian Noise using Spatio-Spectral Total Variation Technique, IEEE, 19 January 2021 , DOI: 10.1109/ITT51279.2020.9320775.
- Using Deep Learning and Machine Learning in Space Network, IEEE, 25 November 2020, DOI: 10.1109/ITT51279.2020.
- Course Outcome Attainments in OBE for Weak Students, International Journal of Innovative Technology and Exploring Engineering (IJITEE), Volume-8 Issue-11, September 2019, ISSN: 2278-3075.
- Supply Chain Management & RFID: An Analysis of Research Productivity, International Journal of Supply Chain Management (IJSCM)  Volume 8,  Number. 2, April 2019, IJSCM, ISSN: 2050-7399 (Online), 2051-3771 (Print)
- Investigation Into Cloud Computing Adoption Within the Hedge Fund Industry, Journal of Cases on Information Technology (JCIT) Volume 21, Issues 3, Article 1, July 2019, DOI: 10.4018/JCIT.2019070101.
- Automating Outcome Based Education for the Attainment of Course and Program Outcomes, IEEE, 25 February 2019, DOI: 10.1109/CTIT.2018.8649532.
- Mining Frequent Termset for Web Document Data Using Genetic Algorithm, International Journal of Pharmacy and Technology Volume 8, Issue 2 , June 2016 ISSN No.: 0975-766X .
- A Study of the Software Development Using Agile, published in International Journal of Engineering, Business and Enterprise Applications (IJEBEA), ISSN (Print): 2279-0020 ISSN (Online): 2279-0039, Issue 10 Volume 2. 193-197, February 2015.

- [Biological Systems Uses in Authentication's Application](#), published in International Journal Research Journal of Pharmaceutical, Biological and Chemical Sciences, Issue 1 Volume 6 February 2015.
- [Unit Test Case Design Metrics in Test Driven Development](#), in International Journal of Software Engineering, Scientific & Academic Publishing USA, Vol.2, No.3:43-48, p-ISSN: 2162-934X   e-ISSN: 2162-8408.
- Improve The Test Case Design of Object-Oriented Software by Refactoring", International Journal of Computer Science and Information Security (IJCSIS), USA, Vol. 8, No. 8: 96-100, ISSN-1947-5500.
- [Metrics for Test Case Design in Test Driven Development](#), International Journal of Computer Theory and Engineering (IJCTE), Singapore,  Volume 2 No  6: 952-956, ISSN-1793-8201.
- [Innovative Engineering Technique of Object Oriented Software Development](#), International Journal of Engineering, Science & Management Education, India,  Vol 3: 41-46, ISSN:0976-0121.
- [Integrated Thallassaemia Decision Support System](#), WSEAS transaction on computer, Issue  8 Volume  9, 957-967, ISSN 1109-2750.
- [New Engineering Technique of Software Development](#), IEEE eXplore, on Computer Technology and Development,671-676, ISBN 978- 1-4244-8845-2/ 10.
- Divya Prakash Shrivastava, "Design Metrics in Test Driven Development of Unit Test Case", IEEE eXplore,2011 on Computer Technology, 1 – 6, ISBN: 978-1-4244-9795-9.

## Book Published:

- **[Understanding of Software Development and Metrics for Test Case Design](#),** Moldova, Europe: LAP LAMBERT Academic Publishing: 2018: ISBN-13: 978-3-659-72093-2.

## Book Chapters published:

- [Fundamental Concepts in Graph Attention Networks](#), , 2023;1-14, © 2023 The Authors.IGI Global . ISBN13: 9781668469033|ISBN10: 1668469030|EISBN13: 9781668469057 DOI: 10.4018/978-1-6684-6903-3.ch006.
- [Analysis assaulting pattern for the security problem monitoring in 5G-enabled sensor network systems with big data environment using artificial intelligence/machine learning](#). IET Wireless Sensor Systems, 2023;1-14, © 2023 The Authors. IET Wireless Sensor Systems published by John Wiley & Sons Ltd on behalf of The Institution of Engineering and Technology.  DOI: 10.1049/wss2.12049 .
- [Secure Authentication in Wireless Sensor Networks Using Blockchain Technology](#), in AI-Enabled Agile IoT for Sustainable FinTech Ecosystems (pages 93-104), Copyright©2022 IGI Global ISBN13: 9781668441763|  ISBN10: 1668441764  | ISBN13 Softcover:  9781668441770|EISBN13: 9781668441787 DOI: 10.4018/978-1-6684-4176-3.ch005.
- [Investigation Into Cloud Computing Adoption Within the Hedge Fund Industry](#), in Research Anthology on Architectures, Frameworks, and Integration Strategies for Distributed and Cloud Computing (pages-1615-1641), Copyright © 2021 IGI Global ISBN13: 9781799853398 DOI:  10.4018/978-1-7998-5339-8.ch079.
- [Cloud-Based Clinical Support System](#), Springer, February 2021, https://doi.org/10.1007/978-3-030-67187-7_24
- [Sensor technologies combined with AI helping in smart transport systems as driverless cars](#) in Advances in Modern Sensors (Pages 10-1 to 10-19). Copyright © IOP Publishing Ltd 2020 Online ISBN: 978-0-7503-2707-7 • Print ISBN: 978-0-7503-2705-3.
- [Introduction to data deduplication approaches](#), in Data Deduplication Approach (pages 1-15 ). Copyright© 2021 Elsevier Inc. All rights reserved ISBN: 978-0-12-823395-5.
- [Investigation Into Cloud Computing Adoption Within the Hedge Fund Industry](#), in Research Anthology on Architectures, Frameworks, and Integration Strategies for Distributed and Cloud Computing (pages-1615-1641), Copyright © 2021 IGI Global ISBN13: 9781799853398 • DOI:  10.4018/978-1-7998-5339-8.ch079.

## Core Competencies:

- **Teaching & Training:** Expertise in delivering high-quality instruction across all degree levels, incorporating innovative teaching methodologies to enhance student engagement and learning outcomes.
- **Curriculum Design:** Proficient in developing dynamic, future-focused curricula aligned with academic standards and industry requirements.
- **Research Guidance:** Skilled in supervising and mentoring research projects, including guiding Ph.D. candidates and fostering a culture of academic excellence.
- **Problem-solving:** Exemplary problem-solving abilities to address academic and administrative challenges with effective, evidence-based solutions.
- **Learning Resource Development:** Adept at creating cutting-edge learning materials and resources for traditional, hybrid, and online platforms.
- **Online Learning Expertise:** Proficient in designing and delivering interactive online learning experiences, utilizing modern educational technologies.
- **Training & Development:** Extensive experience in conducting workshops and training sessions to enhance faculty and student competencies.

- **Consultancy Services:** Providing expert advisory services in academic and technical domains to drive institutional and individual success.
- **Administrative Excellence:** Strong capabilities in overseeing general administration, examination management, and academic operations.
- **Academic Contributions:** Active contributor to research, including editing journals, reviewing books, evaluating scholarly articles, and assessing Ph.D. theses.
- **Public Speaking & Knowledge Sharing:** Renowned speaker at seminars, conferences, and workshops, sharing insights on education, research, and technology trends.

## EXPERIENCE

**Assistant Professor**                                                                                                              Feb 2014 – Present
**Higher Colleges of Technology University, Ministry of Higher Education and Scientific Research, Dubai, UAE**

- **Faculty Role**: Delivering advanced courses including Big Data Technologies, Data Analytics, Hardware Networking, Object-Oriented Analysis and Design (OOAD), Advanced Databases, IT Strategy and Governance, and supervising students in developing innovative projects. These projects focus on Graphics Design, Human-Computer Interface (HCI) Design, and Client-Server Technology, utilizing web applications built on the LAMP framework and advanced web authoring and multimedia tools.
- **Brand Building and Student Engagement**: Strengthened HCT's reputation within educational networks by leading branding initiatives, organizing competitions, and promoting training, consultancy, and project production activities. Encouraged students to participate in **research projects, software, and application development competitions**, fostering a culture of innovation and academic excellence across universities.
- **Course Team Leadership**: Appointed as **Course Team Leader (CTL)**, responsible for designing teaching materials, preparing course delivery plans, updating course content, evaluating students, and analyzing results. Regularly engaged in inter-campus discussions to ensure course standardization and continuous improvement.
- **Curriculum Design**: Designed and developed **competency-based course curricula and Learning Experience Modules** for **Computer Information Science** programs. Aligned these curricula with **IEEE/ACM standards** and integrated industry trends to address workforce demands and enhance graduate employability.

**Associate Professor**                                                                                                              Aug 2013 – Feb 2014
**Namibia University of Science and Technology, Windhoek, Namibia**

- **Teaching and Academic Supervision**: Delivered high-impact teaching across diverse subject areas, designed innovative course curricula, and supervised **research projects, capstone initiatives, and master's theses**, ensuring alignment with academic standards and practical relevance.
- **ICT Coordination and Performance Monitoring**: Led the coordination of ICT courses across remote campus locations, overseeing quality control, performance benchmarks, and grading systems to maintain **academic consistency and excellence** across the university.
- **E-Learning Development**: Collaborated as an integral team member in developing **e-learning platforms** on **Moodle**, enhancing accessibility and engagement through technology-driven learning solutions.

**Associate Professor**                                                                                                              Oct 2009 – Jul 2013
**El Jabal Al Garbi University, Ministry of Higher Education and Scientific Research, Libya**

- **Teaching and Research Supervision**: Delivered specialized instruction and supervised research initiatives, including major projects, while ensuring alignment with academic rigor and industry relevance.
- **Project Guidance**: Mentored projects on cutting-edge topics such as computer simulation of fiber optics, enhancing the bag-of-words model for skin cancer detection in dermoscopic images, and creating a semantic-driven model for ranking digital learning objects based on user comment diversity.
- **Examination Management and Moderation**: Oversaw examination processes, including paper moderation and quality assurance, to maintain the highest standards of integrity and complexity in academic assessments.

**Assistant Professor**                                                                                                              Apr 2008 – Sep 2009
**Eritrea Institute of Technology, Ministry of Higher Education, Asmara, ERITREA**

- **Advanced Instruction**: Provided in-depth teaching in **Advanced Data Structures**, **Java**, and **C programming**, cultivating strong foundational knowledge and problem-solving skills in core computing disciplines.
- **Curriculum Development**: Designed and implemented industry-relevant course curricula, equipping students with the skills to create innovative and practical software solutions.
- **Examination Oversight**: Managed all aspects of examination administration and assessments, ensuring strict adherence to academic standards and alignment with program learning objectives.

**Assistant Professor**                                               Nov 2001 – Feb 2008
**College of Engineering, Rajeev Gandhi Technical University, Bhopal (M.P.), INDIA**

- **Dynamic Teaching**: Delivered interactive lectures and facilitated hands-on learning by guiding students in designing software solutions, fostering collaboration through structured team formations with clearly defined roles and objectives.
- **Project Mentorship**: Supervised student teams in developing innovative projects, instilling problem-solving skills and encouraging creative thinking to prepare them for real-world professional challenges.
- **Training & Placement Leadership**: Spearheaded training and placement efforts, aligning academic instruction with industry requirements to enhance career readiness and foster professional growth among students.

**Associate Professor**                                                 Jul 1998 – Nov 2001
**MCRP University, BHOPAL (MP), India**

- **Academic Supervision**: Guided dissertations and capstone projects, cultivating research-oriented thinking and academic rigor among students.
- **Innovative Instruction**: Delivered high-impact lectures while mentoring students in designing cutting-edge software solutions, emphasizing practical application and innovative approaches.
- **Industry Integration**: Organized educational tours to industries, providing students with firsthand exposure to real-world applications and strengthening their readiness for professional challenges.

**Technology Lead**                                                  Aug 1994 – Jul 1998
**Sagar Soya Limited, Sagar (MP) - INDIA**

- **Operational Optimization:** Designed and deployed software solutions leveraging SQL, Java, and Excel to streamline company operations, including efficient management of revenue inflow, outflow, and inventory systems.
- **Data Management Excellence:** Developed robust inventory systems using SQL, Java, and Excel, ensuring precise data tracking and integration with financial records to enhance operational accuracy and efficiency.

**Education:**

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| **2011:** | **Doctor of Philosophy (Ph.D.) Computer Science,** Barkatullah University, India |
| **1994:** | **Master of Computer Applications (MCA),** National Institute of Technology Raipur (GEC), India. |
| **1990:** | **Bachelor of Science (Electronics/Computer), D**r. Hari Singh Gour University, India. |

**Technical Skills:**

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| **Hardware** | IBM Pentium, PC/AT |
| **Operating Systems** | MS-DOS, Windows, Linux, UNIX |
| **Programming Languages** | Python, R, C#, C/C++, Pascal, COBOL, FORTRAN |
| **J2EE Technologies** | Java, Servlet, JSP, JavaBeans |
| **Database Management Systems (DBMS/RDBMS)** | dBASE, FoxPro, MS Access, Oracle, MySQL |
| **Scripting Languages** | PHP, JavaScript, HTML, XML, Python |
| **Multimedia & Web Authoring Tools** | Adobe Photoshop, Dreamweaver, Flash, MS Office, LaTeX |
| **Data Processing Tools** | RapidMiner, Rattle, Big Data Tools, Cloudera VM, MongoDB, Splunk, Spark, Flink |
| **Data Visualization Tools** | Tableau, Pandas, KNIME, Microsoft Power BI |
| **Blackboard Learn Tools** | Building Assessments Using Respondus 4.0, Getting Started with Blackboard, How to Set Up Blackboard's Grade Center 101, Invigilating Online Assessments in Blackboard, Managing Your Course in Blackboard, Overview of the Assessment Development Guidelines and Implementation Plan. |

**Training / Certifications / Other Courses**

- Data Privacy Fundamentals, powered by IBM Developer Skills Network, issued by cognitive class, credential Id : DS0301EN.
- Data Science for Business - Level 1, issued by IBM.
- Python 101 for Data Science, powered by IBM Developer Skills Network, issued by cognitive class.
- Python for Data Science, issued by IBM.
- "Cloud Practitioner Essentials" successfully completed, AWS training and certification, a course of study offered by AWS effective from August 2020

- [Data Science: R Basics](#), Issued by Harvad University (HarvardX), Credential Id- 61aa4e27de6343f992bb28d91bba2df3.
- Certificate of "SAS Predictive Modeling Workshop" Successfully completed, by SAS Global Education – Statistics and Advanced Analytics April 7 – April 11, 2019.
- [Big Data Integration and Processing](#), issued by UC-San Diego and Coursera, Credential ID- 3QFVDDRC7ENE.
- [Big Data Modeling and Management Systems](#), issued by UC-San Diego and Coursera , Credential ID- 4AWD35KA6D7D.
- [Introduction to Big Data](#), issued by UC-San Diego and Coursera, Credential ID- W23UPUBP3572.
- ITIL® Foundation Certificate in IT Service Management, EXIN effective May 2015, Credential id- 5362059.20400017.
- Cloud Computing Foundation, EXIN effective from 16th May 2015, credential ID-5362059.20399633,