Soni

PhD Scholar in Computer Science
(AI-Based Model to Predict Depression in Women Using ML)

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Summary

I am passionate about Artificial Intelligence, Machine Learning, and Data Mining, with a strong focus on using cutting-edge technologies to solve real-world problems and drive meaningful impact. My research centers on developing AI-based predictive models for mental health, specifically depression prediction in women using physiological data and machine learning techniques. I enjoy exploring the potential of AI and deep learning to create innovative solutions that enhance healthcare outcomes and improve quality of life. I thrive in environments where I can contribute to research, teaching, and application development, helping to bridge the gap between academic knowledge and practical implementation.

Experience

- **Lecturer**   **January 2025 – Present**
  Dev Sanskriti Vishwavidyalaya (DSVV), Haridwar
  Teaching undergraduate and postgraduate courses in Computer Science, with focus on Artificial Intelligence, Machine Learning, and Data Mining. Mentoring students in research projects and guiding them in developing practical AI applications.

Education

- **PhD Scholar, Machine Learning & Artificial Intelligence — Computer Science**
  March 2024 – Present
  Maharishi Markandeshwar Deemed to be University, Haryana
  Thesis: Development of an AI-Based Model to Predict Depression in Women Using Machine Learning

- **Master of Computer Applications (MCA)**   **July 2021 – June 2023**
  Dev Sanskriti Vishwavidyalaya (DSVV), Haridwar
  CGPA: 8.12/10

- **Bachelor of Computer Applications (BCA)**   **July 2018 – May 2021**
  Deenbandhu Chhotu Ram University of Science and Technology
  DCRUST, Murthal, Haryana
  CGPA: 7.89/10

Research Interests

Machine Learning, Artificial Intelligence, Data Mining, Mental Health Analytics, Predictive Modeling

Technical Skills

- **Programming:** Python, C, C++, JavaScript

- **Machine Learning & AI:** Deep Learning, Data Mining, Predictive Modeling, Mental Health Analytics

- **ML Frameworks:** TensorFlow, PyTorch, Scikit-learn

- **Web Technologies:** HTML, CSS, MySQL

- **Tools & Systems:** MS Office, Git

- **Other:** Research Methodology, Data Analysis, Technical Writing, Problem Solving

Academic Projects

AI-Based Depression Prediction Model   June 2025

- Developing AI-based model to predict depression in women using physiological data and machine learning algorithms

- Identifying key factors and creating enhanced prediction models with improved accuracy

- Validating performance using established depression assessment scales for early detection

- **Tech Stack:** Python, TensorFlow, PyTorch, Scikit-learn, Pandas, NumPy

Tour and Travel Management System   2023

- Designed comprehensive tour and travel management system as master's degree project

- Enabled users to browse packages, book tours, and manage itineraries with real-time availability

- Implemented automated payment processing with focus on user experience and security

- **Tech Stack:** HTML, CSS, JavaScript, PHP, MySQL, Bootstrap

E-commerce Website   2021

- Created fully functional e-commerce website with product catalog and search functionality

- Developed shopping cart system with user authentication and session management

- Integrated payment gateway for secure online transactions

- **Tech Stack:** HTML, CSS, JavaScript, MySQL, PHP

Publications

Published Papers

1. P. K. Gantayat, T. Kaur, M. Majhi, U. K. Jena, S. Das, and **Soni**, "From Efficiency to Innovation: LLM 5.0 and the Future of Industry," *2025 International Conference on Multi-Agent Systems for Collaborative Intelligence (ICMSCI)*, Erode, India, 2025, pp. 551-558, doi: 10.1109/ICMSCI62561.2025.10894335.
   Available at: https://ieeexplore.ieee.org/document/10894335

2. **Soni**, "Role of AI and Machine Learning in Enhancing Cyber Security Measures," *International Conference on Advancement of Digital Transformation across Industry and Academia (ADTIA-2025)*, Institute of Hospitality Management & Science, Kotdwar, Uttarakhand, January 2025.

3. **Soni**, "Digital Excellence: Innovations in Computing, Security, and Automation," *Prudence' 25 International Conference on Innovation and Excellence: Managing the Digital Revolution (IEMDR)*, April 2025.

4. **Soni**, "AI and the Future of India's Manuscript Heritage: 2040 Perspective," *Faith & Future: Integrating AI with Spirituality*, 2025. [**Best Paper Award**]

5. **Soni** , "AI Based Decision Support Systems in Telehealth," *International Conference on Applications of Mathematical & OR Models for Sustainable Viksit Bharat (ICORSVB 2025)*, ISBN: 978-81-984602-3-3, Paper Code: 3.10
   Available at: https://www.researchgate.net/publication/389210616_Next_Gen_AI

To Be Published

1. **Soni**, "Comprehensive Study of Existing Prediction Models for Depression in Women," *ICMEET 2025.*

2. **Soni**, "To Identify Key Factors in Influencing Depression in Women Using Physiological Data," *International Conference on Data Mining and Information Security (ICDMIS 2025)*

3. **Soni**, "Develop an Enhanced AI-Based Model to Predict Depression in Women," *ICCCA-2025*

4. **Soni**, "Evaluate and Validate the Performance of the Proposed Prediction Model Using Established Depression Assessment Scales," *COM-IT-Con 2025*, Taylor & Francis.

Patent

Interactive Display for Wearable Technologies   **2024-2025**

Application No.: 456403-001   *Status: In Process*

Innovative display technology designed for integration with wearable devices, enhancing user interaction and data visualization in health monitoring and fitness tracking applications.

Workshops & Training

- AICTE Training & Learning (ATAL) Academy Faculty Development Program on Advanced Computing for Sustainable Development: AI-Driven Innovation in Real Life Applications

- One Week Short Term Course on Research Advancements in Responsible & Trustworthy AI with ML Applications, Department of Computer Science and Engineering, IIT Roorkee, India

- One-Day Workshop on Canva — Organized by DSVV

- Cyber Security Workshop

Achievements

- Awarded by State Government for Excellence.

- Best Paper Award at Faith & Future Conference

- IELTS — 7 Band

Additional Skills

Languages: English (IELTS 6 Band)
Soft Skills: Teamwork, Observation, Decision Making, Quick Learning, Communication Skills