



# Lakhan Bhaskar Kadel

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## Profile

**Lakhan Bhaskar Kadel** holds a B.Tech and M.Tech in Computer Science and Engineering and is currently pursuing a Ph.D. in Artificial Intelligence and Deep Learning. He has more than 11 years of teaching experience in Computer Science and Engineering and has been actively involved in teaching, research, academic development, mentoring, and the application of emerging technologies in education. His academic journey reflects a progression from core areas of Computer Science toward advanced research in Artificial Intelligence, Machine Learning, and Deep Learning. His professional interests focus on developing strong conceptual foundations in students while encouraging the practical application of computational techniques to solve complex and real-world problems.

His **Ph.D. research** focuses on “**Performance Enhancements in a Weather Prediction and Forecasting System Using Deep Learning Techniques.**” The primary technological domain of his doctoral research is **Deep Learning and Artificial Intelligence**, with particular emphasis on improving the accuracy and efficiency of weather prediction and forecasting systems. His research involves the application of data-driven techniques to analyze meteorological information, identify complex patterns, develop predictive models, and evaluate their performance. The work explores various Machine Learning and Deep Learning approaches for weather and temperature forecasting, including multivariate meteorological data and advanced neural network architectures. Through his doctoral research, he aims to contribute to the development of reliable and efficient intelligent forecasting systems for practical applications in weather prediction and environmental analysis.

Prior to his doctoral research, his **M.Tech thesis** provided a foundation in Natural Language Processing, distributed computing, and Machine Learning. His postgraduate thesis was titled “**Parts of Speech Detection in NLP using Hadoop.**” The objective of the project was to develop an approach for detecting Parts of Speech in Natural Language Processing using Hadoop-based distributed computing. The project integrated **Natural Language Processing, Machine Learning, Hadoop, and MapReduce** for the processing and analysis of textual data. The technologies used included **J2SE, Hadoop, MapReduce, and Machine Learning**, while the tools and platforms included **Oracle VirtualBox, Cloudera Hadoop, and OpenNLP**. The project provided practical exposure to distributed data processing, NLP techniques, text analysis, and the application of computational methods to language-related problems. This research established an early foundation for his continued interest in intelligent computing and data-driven applications. His research interests primarily encompass **Artificial Intelligence, Machine Learning, Deep Learning, Natural Language Processing, and their applications to real-world problems**. His research journey demonstrates a progression from NLP and distributed computing during his postgraduate studies to advanced Deep Learning-based

predictive systems during his doctoral research. He is particularly interested in developing, comparing, and optimizing intelligent computational models and applying them to challenging real-world datasets. His research activities involve data preprocessing, feature selection, model development, training, optimization, comparative analysis, and performance evaluation. He is interested in understanding the strengths and limitations of different computational approaches and identifying suitable models for specific application domains.

He has published **more than 10 research papers** in various academic forums, including **IEEE conferences, Scopus-indexed journals, and other peer-reviewed journals**. His publications reflect his continued engagement with research in Artificial Intelligence, Machine Learning, Deep Learning, and weather prediction and forecasting. One of his recent research contributions is “**A CNN–LSTM Deep Learning Framework for Multivariate Temperature Forecasting and Extreme Weather Event Analysis**,” authored by **L. B. Kadel and M. Kalla** and published in the *Journal of Intelligent Decision Making and Information Science*, Volume 3, Number 6S, pages 1841–1861, in 2026, eISSN 3079-0875. The publication is **Scopus-indexed and ranked Q1 according to SCImago Journal Rank**. The study reflects his continuing research in Deep Learning-based weather forecasting and the application of hybrid neural network architectures to multivariate temperature prediction and extreme weather event analysis.

In addition to his research publications, he has contributed to **Intellectual Property and technological innovation** through a registered design titled “**Intelligent Computing Device for Real Time Data Processing**,” **Registered Design No. 503994-001, Class 14-02, Patent Office, Government of India, 2026**. The registered design demonstrates his interest in developing innovative computing solutions and translating technological concepts into practical applications. His involvement in both research publications and intellectual property reflects a broader commitment to innovation and the practical application of Computer Science and emerging technologies.

His technical expertise covers a broad range of programming languages and fundamental areas of Computer Science. He has programming expertise in **Java, Python, C, and C++**, providing a strong foundation for software development, algorithm implementation, computational experimentation, and research-oriented programming. His knowledge of Python is particularly relevant to Artificial Intelligence, Machine Learning and Deep Learning while his expertise in Java, C, and C++ supports programming, object-oriented development, algorithmic implementation, and system-level understanding.

His technical and academic interests also include **Operating Systems, Discrete Mathematics, Theory of Computation, Compiler Design, Database Management Systems, Computer Organization and Architecture, and Data Structures and Algorithms**. These areas provide the theoretical and practical foundation for his teaching and research activities. His teaching interests include **Theory of Computation, Java Programming, Compiler Construction, Operating Systems, Data Structures and Algorithms**, and other core areas of Computer Science. With extensive teaching experience, he emphasizes conceptual clarity, logical reasoning, problem-solving skills, programming proficiency, and the practical implementation of theoretical concepts.

His teaching philosophy focuses on connecting fundamental Computer Science principles with contemporary technologies. He encourages students to analyze computational problems, design appropriate algorithms, implement solutions using suitable programming languages, and evaluate the efficiency and effectiveness of their approaches. He is particularly interested in integrating Artificial Intelligence, Machine Learning, and other emerging technologies into Computer Science education, while maintaining strong foundations in programming, algorithms, databases, operating systems, computer architecture, and computational theory.