

# Faculty Profile

## Nirmal Varghese Babu

Assistant Professor,  
Division of Data Science and Cyber Security  
email id: nirmalvarghese@karunya.edu



## Academic Background

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Degree	University	Year
Ph.D	Karunya Institute of Technology and Sciences	Pursuing
M.Tech	A P J Abdul Kalam Technological University, Trivandrum	2019
B.Tech	Karunya University	2017

## Courses Taught

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- Artificial Intelligence: Principles and techniques
- Machine Learning Operations
- Artificial Intelligence for Games
- Artificial Intelligence in Food Engineering
- Artificial Intelligence for Biotechnology
- Entrepreneurship and Product Development
- Soft Skills

## Research Interests

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- Artificial Intelligence
- Data Science
- Image processing
- Text Analysis

## Most recent Publications

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- Navya Kannan, Nirmal Varghese Babu(2024), “**EEG Based Emotion Recognition using Genetic Algorithm Optimized Ensemble Model**”, HINT(2024).
- Nevin Sugu, Nirmal Varghese Babu(2024), “**Text based Emotion Recognition with Hybrid Feature Selection and Ensemble Classification: A BERT and RoBERTa Approach**”, HINT(2024).
- Swetha S, Nirmal Varghese Babu (2024), “**Facial Expressions and EEG Signals for Emotion Recognition using Deep2Face Algorithm**”, ICACCS(2024).
- Adityasai B, Nirmal Varghese Babu(2024), “**Advancing Alzheimer’s Diagnosis through Transfer learning with DEEP MRI Analysis**”, AMATHE(2024).
- Simrith C Prince, Nirmal Varghese Babu(2024), “**Advancing Multiclass Emotion Recognition with CNN-RNN Architecture and Illuminating Module for Real Time Precision using Facial Expressions**”, AMATHE(2024).
- Nirmal Varghese Babu, Dr. E. Grace Mary Kanaga (2022), “**An Experimental Investigation on the Emotion Recognition using Power Spectrum Density and Machine Learning Algorithms in EEG Signals**”, EAI BDCC(2023).
- Nirmal Varghese Babu, Dr. E. Grace Mary Kanaga (2022), “**AI Based Analysis for Depression Detection: A Critical Evaluation of Current Approaches and Future Directions**”, CISES(2023).
- Nirmal Varghese Babu, Dr. E. Grace Mary Kanaga (2022), “**Sentiment Analysis in Social Media Data for Depression Detection using Artificial Intelligence: A Review**”, Springer Nature Computer Science, 3, Article number: 74 (2022).
- Nirmal Varghese Babu, Dr. E. Grace Mary Kanaga, “**Multiclass Text Emotion Recognition in Social Media Data**” in the 4th International Conference on Machine Intelligence and Signal Processing- 2022, NIT Raipur.
- Nirmal Varghese Babu, Dr. E. Grace Mary Kanaga, “**Depression Analysis using Electroencephalogram Signals and Machine Learning Algorithms**” in the 3 rd International Conference on Intelligent Computing, Instrumentation and Control Technologies – 2022, Vimal Jyothi College of Engineering, Kannur.
- Nirmal Varghese Babu, Fabeela Ali Rawther(2021), “**Multiclass Sentiment Analysis in Text and Emoticons of Twitter Data: A Review**”, “ Second International Conference on Networks and Advances in Computational Technologies.
- Nirmal Varghese Babu, Fabeela Ali Rawther(2019), “**Multiclass Sentiment Analysis of Social Media Data using Neural Networks**”, International Journal of Engineering and Advanced Technology.
- Nirmal Varghese Babu, Fabeela Ali Rawther(2019),” **User Behaviour Analysis on Social Media Data using Sentiment Analysis or Opinion Mining**”, International Research Journal of Engineering and Technology.