NARASARAOPETA ENGINEERING COLLEGE (AUTONOMOUS)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

2024-2025

Batch Number	AB2
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Guide	Dr. S. Siva Nageswara Rao M. Tech., Ph. D
Title	Beyond Parental Height: A Multi-Model Deep Learning Approach for Personalized Adult Height Prediction
Domain/Technology	DEEP LEARNING
Base Paper Link	https://ieeexplore.ieee.org/document/10227284
Dataset Link	https://www.kaggle.com/datasets/jaorcovre/galton-height-data
Software Requirements	Browser: Any latest browser like Chrome Operating System: Windows 7 Server or later Python (COLAB)
Hardware Requirements	System Type: Intel Core i5 or above RAM: 8 GB Number of cores:5 Number of Threads: 4
Abstract	A new multi-model deep learning approach is proposed for predicting adult height using the Galton historical dataset with advanced feature engineering. Traditional height prediction methods relied on linear parent-offspring relationships, overlooking genetic, environmental, and lifestyle factors. This study incorporates influences like birth order and physical activity for a more comprehensive model. Experiments on raw and processed data, particularly outlier removal, showed improved accuracy. Results highlight the superiority of multi-model systems over single-model approaches due to their flexibility and reliability. Data pre-processing, especially outlier handling, proved crucial, significantly enhancing predictive performance. This study provides pediatricians and parents with a reliable tool for growth forecasts, emphasizing the role of data science in personalized healthcare and paving the way for further growth modeling research.

Signature of the student(s)   **Signature of the Guide**   **Signature of the project coordinator**