

# KARTHIK VINAYAN

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## EDUCATION

### St. Thomas Central School

AISSCE - PCM with Computer Science

Jun 2009 – Mar 2021

Thiruvananthapuram, IN

### Vellore Institute of Technology

B. Tech Computer Science and Engineering  
Specialisation in Artificial Intelligence and Machine Learning

Sep 2021 – Jun 2025

Chennai, IN

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## SKILLS

- Programming Languages: Python, C, C++, Java, React, NodeJS, HTML + CSS, SQL + MongoDB
- Tools: Git, AWS, Azure, GCP, Docker
- Languages: English, Malayalam, Hindi

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## PROJECTS

### Textile Defect Detection Research Project

*TensorFlow, Pandas, NumPy*

[kaggle.com/code/nexuswho/aitex-defect-detection](https://kaggle.com/code/nexuswho/aitex-defect-detection)

- Collaborated with faculty on textile defect detection research, developing a Residual Neural Network (ResNet) model.
- Achieved an impressive 96% accuracy through rigorous evaluation of the deep learning model's performance.

### Detection and Filtering of Hate Speech from Public Data using DCNN

*TensorFlow, Pandas, NumPy*

[kaggle.com/code/nexuswho/hate-speech-cnn](https://kaggle.com/code/nexuswho/hate-speech-cnn)

- Implemented a robust machine learning model utilizing deep convolutional neural networks (DCNNs) and long short-term memory networks (LSTMs) to identify hate speech in tweets.
- The model's capability to filter hate speech from public data positions it as a valuable tool for fostering online safety and promoting civil discourse.

### IoT-based Automated Climate Control System

*Arduino, Firebase*

- Designed and implemented an Arduino-based IoT project for automated climate control, optimizing energy efficiency and occupant comfort by dynamically adjusting temperature settings based on ambient temperature and room occupancy.