

# Sai Vignesh S

B.Tech Artificial Intelligence and Machine Learning  
Hindusthan College Of Engineering and Technology

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GitHub Profile

LinkedIn Profile

## EDUCATION

### • Bachelor of Technology in Artificial Intelligence and Machine Learning

Hindusthan College Of Engineering and Technology

2020-24

CGPA: 9.2

### • HSC

Premier Vidhya Vikhas

2019-20

Board Exam

### • SSLC

.K. Sree Rangammal Kalvi Nilayam

2017-18

Board Exam

## PERSONAL PROJECTS

### • Article Validation using Semantic Analysis

Oct 2024

*Semantic analysis system to validate articles against sector-specific datasets.*

- Utilized pg\_vector and Sentence Transformer BERT model for article analysis and classification.
- Identified article relevance by comparing with sector-specific datasets to classify as valid or invalid.
- Technology Used: Python, PostgreSQL, pg\_vector, BERT, Semantic Analysis.

### • Events Classification ML Script

Sep 2024

*ML-based classification system for event categorization using DistilBERT.*

- Populated event categories and sub-categories based on event name, description, and source URL.
- Achieved 85% accuracy in classifying events into correct category and sub-category.
- Technology Used: Python, DistilBERT, Machine Learning, NLP.

### • Hotels Information using LLM

Feb 2024

*Web scraping and LLM-based data processing system for hotel information.*

- Scraped data from URLs and stored in MongoDB collection for processing.
- Utilized LLM with Ollama in Python to display and analyze hotel details.
- Technology Used: Python, MongoDB, LLM, Ollama, Web Scraping.

### • Face Based Attendance Detection System

June 2022

*Automated attendance system using facial recognition with YOLOv3.*

- Automates student attendance by recognizing faces using YOLOv3 algorithm.
- Maps students' faces by comparing with stored images, achieved 77% accuracy rate.
- Technology Used: Python, YOLOv3, Computer Vision, Deep Learning.

### • QA Automation Script

*Automated quality assurance script for data validation.*

- Cross-checks website data with MongoDB collection fields and alerts on mismatches.
- Runs periodically using Selenium bot automation for continuous monitoring.
- Technology Used: Python, Selenium, MongoDB, Automation.

## EXPERIENCE

### • Jr. Data Engineer

Sep 2024 - Present

Aggregate Intelligence

*Full-time Position*

- Started as Junior Data Engineering Intern and transitioned to Junior Data Engineer role.
- Skilled in MSSQL Server, MySQL, PostgreSQL, MongoDB, and Python automation.
- Experience in Database Migration, Optimization, Elasticsearch, Backup/Restore, and Bash Script Automation.
- Expertise in Semantic Analysis and Vectorization for database tasks, leveraging pg\_vector for similarity searches.
- Data Analysis: Validating articles through semantic analysis, predicting event categories and sub-categories.
- Strong understanding of pipeline automation and data analysis, driving efficient data flow across platforms.

### • Data Science Intern

July 2023 - August 2023

Bharat Intern

*Remote Internship*

- Gained understanding of data science concepts and completed multiple data science projects.
- Developed Titanic Survival Prediction ML model and Handwritten Text Classification model.

**•Python Intern***Internship Program*

- Participated in Python internship and hackathon organized with Naan Mudhalvan and STEP NITK.

*March 2023 - April 2023*

Pantech E learning - Naan Mudhalvan

**•AICTE Java Intern***AICTE Partnership**Jan 2023 - Feb 2023*

JT Wisdom Technology Private Limited

- Learned core Java concepts in association with AICTE.
- Received internship certificate after clearing the Java exam conducted.

**•Embedded Intern***Internship**Nov 2021 - Dec 2021*

New Qbitronics

- Gained experience with GCC platform for Wi-Fi controller project and Wi-Fi mobile starter.
- Worked on RTOS, Raspberry Pi OS installation, and microprocessor setup for embedding automatic tasks.

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**TECHNICAL SKILLS AND INTERESTS****Languages:** Python, Java (Basics), SQL**Databases:** PostgreSQL, MSSQL Server, MySQL, MongoDB, Elasticsearch**Tools & Technologies:** AWS S3, pg\_vector, Selenium, Git, Bash Scripting, Excel Automation**ML/AI Technologies:** DistilBERT, BERT, Sentence Transformers, YOLO, Ollama, LLM**Specializations:** Data Engineering, Database Migration & Optimization, Semantic Analysis, Vectorization, NLP**Relevant Coursework:** Data Structures & Algorithms, Database Management Systems, Machine Learning, Artificial Intelligence, Big Data Solutions.**Areas of Interest:** Data Engineering, Machine Learning, AI, Database Optimization, Automation.**Soft Skills:** Problem Solving, Team Collaboration, Self-learning, Project Management, Adaptability

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**ACHIEVEMENTS****•Techgium 6th Edition Hackathon Semi-Finalist** Qualified for 2nd round (Semi-Finals) by L&T Technology Services a**•NPTEL Social Network Exam** Achieved Elite Silver certification and Topper recognition

2023