

Gokul Sunil Sodar

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Education

Bachelor of Technology in Computer Science and Engineering

Vellore Institute of Technology, Vellore, India

September 2021 – Present

CGPA – 7.72

Class 12 - CBSE

Indian Educational School, Kuwait

2021

95.6 Percent

Class 10 - CBSE

Indian Educational School, Kuwait

2019

88.4 Percent

Projects

1. Fine-tuned T5-small 60M parameter model for English to Hungarian Translation

[\(GitHub\)](#) [\(Website\)](#)

- Fine-tuned Google's **T5-small** (60M parameters) model for English-to-Hungarian translation using the OPUS Books dataset on a **Kaggle** notebook with an **NVIDIA P100 GPU**.
- Deployed the fine-tuned model as a **Docker** container on **Google Cloud Run**.

2. Interactive Learning Chatbot

[\(GitHub\)](#) [\(Website\)](#)

- Developed a Conversational AI Chatbot using LLM APIs in a "teach-and-learn" framework, where the user teaches a topic, and the LLM responds as an eager student, fostering mutual learning and engagement.
- Utilized key technologies like **Pydantic_ai**, **Streamlit**, and **Groq API** to build an efficient and interactive chatbot experience.
- Deployed the chatbot on **Streamlit**, ensuring a user-friendly interface for seamless interaction.

3. Quantum Encoding for ML-Based Intrusion Detection

[\(Github\)](#)

- Applied **quantum encodings** to **ISCX datasets (2009–2016)** and evaluated their impact on canonical ML models for **intrusion detection**, comparing performance with and without encodings to analyze improvements in classification accuracy and efficiency.
- Utilized **PennyLane**, **Scikit-Learn**, **Pandas**, and **NumPy** for implementation and performance evaluation.

4. Youtube Video summarizer chrome extension

[\(GitHub\)](#)

- Developed a YouTube Summarizer Chrome Extension using **Groq API**, extracting video transcripts by inspecting the webpage source code and generating concise summaries.
- Utilized **JavaScript** and **DOM manipulation** instead of Chrome or YouTube APIs, ensuring seamless extraction without external dependencies.

5. USA Land price prediction

[\(Github\)](#)

- Developed a machine learning model to predict land prices using data sourced from realtor.com.
- Experimented with various algorithms, including **Decision Tree**, **Random Forest**, **XGBoost**, **Extra Trees** and many others, achieving the highest performance metrics with **Random Forest**.

Papers and Publications

1. Comparative Analysis of Quantum, Classical, and Hybrid Machine Learning on Medical Datasets

Ongoing (Paper)

- Conducted a comparative study on **QSVC**, **SVM**, **Random Forest**, **Naïve Bayes**, and **Hybrid (QSVM+SVM)** models.
- Implemented models using **PennyLane** for quantum computing and **scikit-learn** for classical machine learning.
- Currently applying to **Scopus-indexed conferences** for **publication**.

2. Analysing Encrypted Network Traffic using Quantum Machine Learning

Ongoing

- Developing a quantum machine learning model to analyze encrypted network traffic for anomaly detection and cybersecurity threat mitigation.

Experience

1. RPA Intern

August 2023 – September 2023

UBGroup, Kuwait City, Kuwait

- Developed an invoice processing automation system using **UIPath**, automating the extraction of invoices from Google Drive, applying OCR for data extraction, and storing results in Excel.
- Implemented end-to-end automation by uploading the processed Excel sheet back to Google Drive, streamlining invoice management.

Achievements and Extracurricular Activities

1. Top Coder

June 2024

- Shortlisted among the top **coders** across all four VIT campuses in a competitive coding test.

2. VITEEE

July 2021

- Achieved 11,432 rank in VITEEE (VIT entrance examination).

3. 5th Pillar – VIT

Feb 2023 – Feb 2024

- Attended meetings and actively participated in discussions.
- Published articles related to politics on the club's **Medium** page.

Skills

- **Programming Languages** - Python, C, SQL, C++, Java

- **Frameworks** – Langchain, Pydantic_ai, numpy, pandas, scikit-learn, tensorflow, pytorch, transformers.

- **Other Skills** - Communication, Public Speaking, Team Management, Content Writing, Conflict Resolution, Leadership, Data Analysis, Root Cause Identification, Statistics, Market Strategy, Business Analytics, Presentation, Industry Research

Certifications

- AWS Certified Cloud Practitioner ([Link](#))

- AWS Academy Graduate - AWS Academy Cloud Foundations ([Link](#))