

# 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. 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.

### 2. Quantum Encoding for ML-Based Intrusion Detection

Ongoing

- 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.

### 3. 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.

### 4. 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**.

### 5. Invoice Data Extractor Automation

([Github](#))

- Utilized **UIPath** for automating the processing of invoice documents by downloading them from Google Drive, extracting relevant details using **OCR**, and storing the data in an Excel sheet.
- Automatically uploaded the processed Excel sheet back to Google Drive, ensuring end-to-end automation of invoice data management.

## 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

June 2024 – August 2024

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. 5<sup>th</sup> 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

- **Frameworks** – Langchain, Pydantic\_ai, numpy, pandas, scikit-learn, tensorflow, pytorch.

- **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](#))