# Sarth Subhashbhai Kanani

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## EDUCATION

**Master of Science, Computer Science (Honors)** — **May 2024**
*University of Southern California, Los Angeles, California* — **CPI:4.0/4.0**
Coursework : Algorithms, Web Technologies, Artificial Intelligence, Machine Learning for Data Science

**Bachelor of Technology, Computer Engineering** — **May 2022**
*Pandit Deendayal Energy University, Ahmedabad, India* — **CPI:9.78/10.00**

## TECHNICAL SKILLS

**Programming:** Python, C++, C, Java, SQL, JavaScript, TypeScript, jQuery, PHP, Solidity, HTML, CSS, Node.js
**Database:** MySQL, MongoDB, DynamoDB, Firebase
**Software Packages:** Tensorflow, Keras, Scikit-Learn, SciPy, PyTorch, OpenCV, NLTK, Flask, Pandas, Matplotlib, React.js
**Technologies:** GIT, AWS, Postman, Latex, Tableau, Angular, GCP

## EXPERIENCE

**Machine Learning Intern** — **May 2023–Aug 2023**
*Yardi Systems Inc.*
- Researched and implemented time series forecasting models (ARIMA, LSTM, Temporal Fusion Transformer) for forecasting maintenance work orders from real estate properties.
- Created a flask application for generative AI models (Camel 5b, Falcon 7b, OpenAI model) that takes required inputs as parameters for crafting prompts and returns write-ups for real estate properties' web page and blog posts.

**Software Development Intern** — **Apr 2021–Dec 2021**
*GlobalVox Inc.*
- Worked with Blockchain and Web development teams to develop a decentralized e-commerce application with 3 types of auctions where bets were treated as transactions on Solana blockchain.
- Launched 2 tokens on Solana testnet and integrated with decentralized application.

**Undergraduate Research Assistant** — **Jan 2020–Dec 2020**
*Pandit Deendayal Energy University | Project: Smart Doorbell | Publication | Video*
- Engineered a smart doorbell using Raspberry pi and Amazon Web Services(AWS) that performs advance scene detection and connects with low cost of operation and a latency of <1s while maintaining a significant accuracy.
- Created a mobile application that connects with object detection system for real-time notification and anywhere data access, and a Conversational AI to interact with doorbell using AWS' Alexa service.

## PROJECTS

**Event Master Web Application — Demo** — **Spring 2023**
*Angular, Node.js, TypeScript, JavaScript ES6+, jQuery, Bootstrap, AJAX, GCP*
- Developed a robust web application that uses Node.js, TypeScript, Ticketmaster API, Spotify API, Google Maps API, Ipinfo API, and AJAX to display event, artist, and venue information.
- Employed AngularJS, JavaScript, jQuery, HTML5, and Bootstrap for client-side scripting to create an engaging user experience and deployed application on the Google Cloud platform for optimal performance and accessibility.

**SQL Query Generation from Natural Language Questions — Code | Report** — **Spring 2023**
*Python, Natural Language Processing, PyTorch, NLTK, LSTM network*
- Generated SQL queries from natural language questions using Bi-directional LSTM network.
- Implemented column attention mechanism for select column function, and where clause function of SQL query.
- Achieved an accuracy of 89.5% on aggregation function, 85.62% on select column, and 72.6% on where clause for test data.

**GO playing agent for a 5*5 board — Code** — **Fall 2022**
*Python, C++, Artificial Intelligence, Alpha-Beta Search*
- Built a 5*5 Go game playing agent using alpha-beta pruning for minimax algorithm as a part of academic project.
- Devised a custom heuristic value based on liberty and number of stones a move will kill for a depth of 4 moves.
- Defeated random player, greedy player, aggressive player, alpha-beta player, and Q-learning player.

## LEADERSHIP & INVOLVEMENT

- Secured 2nd position in poster presentation competition at **Research Innovation and Incubation Showcase 2020, IIIT Delhi**.
- Managed Computer Society of India, a student chapter and handled several workshops at PDEU.
- Volunteered for Nirmal Foundation NGO, focused on educating students from rural areas in India.