# Venkata Siva Rama Sarma Maruvada

*Computer Engineering Graduate*
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## Summary

Results-driven Computer Engineering graduate with solid expertise in cloud computing, embedded systems, and distributed systems. Skilled in designing and optimizing scalable architectures, automating processes, and improving system performance. Proficient in Python and C, with experience implementing advanced algorithms to enhance decision-making in various applications. Strong problem-solving and analytical skills, paired with effective communication and collaboration abilities. Dedicated to leveraging technology to create impactful solutions while actively pursuing continuous professional development.

## Technical Skills

**Languages:** Python, C, Embedded C, SQL
**Developer Tools:** Git, Docker, VS Code, Code Composer Studio
**Cloud Platforms:** AWS (EC2, S3, Lambda, CloudFormation), GCP (Storage, Compute Engine), Microsoft Azure (Python, Git services)
**Full Stack Technologies:** ReactJS, Node.js, Flask
**Data Visualization Tools:** Tableau
**Networking:** Basic understanding of TCP/IP, SSH, and network layers of the OSI Model

## Coursework

- Database Systems
- Distributed Systems
- Artificial Intelligence
- Embedded Systems
- Cloud Computing
- Algorithms Analysis
- Data Structures
- Project Management

## Education

**University of Texas at Arlington** — Arlington, TX
*Master of Science in Computer Engineering; GPA 3.0* — *2022 - 2024*

**Gandhi Institute of Technology and Management** — Visakhapatnam, India
*Bachelors in Electronics and Communication Engineering; GPA 3.0* — *2015 - 2019*

## Experience

**Cloud Operations Associate Consultant** — Mar 2020 – May 2021
*Cognizant Technology Services* — *Hyderabad, India*

- Optimized **cloud infrastructure** and automated processes, reducing manual interventions by **30%** and improving **system performance**.
- Resolved technical issues, enhancing **high availability** and **fault tolerance** in distributed environments.
- Collaborated to eliminate **bottlenecks**, achieving a **25% reduction** in processing times.
- Conducted **post-incident reviews** to boost **system resilience** and **uptime**.

## Projects

**Dockerized gRPC-Backed Image Search Engine** | *Python, Flask* — Sep 2023 – Dec 2023

- Developed a **Flask** web application for image search, achieving a **40% improvement** in query response times.
- Enhanced communication efficiency with **gRPC** and **Protobuf**, reducing processing time by **30%**.
- Containerized the application using **Docker**, cutting deployment time by **50%** and improving scalability.
- Handled up to **100 concurrent requests**, gaining experience with **distributed systems**.

**DMX512A Stage Lighting Controller with TM4C123GH6PM** | *C, Embedded C* — Sep 2023 – Dec 2023

- Built a **DMX512A controller** using the **TM4C123GH6PM microcontroller** and **RS-485 communication protocol** for stage lighting.
- Optimized hardware assembly with an efficient PCB design, reducing assembly time by **20%**.
- Leveraged **UART** and **RS-485 IC** for robust data transmission on the DMX512A bus.
- Utilized **PWM** to control LEDs and servo motors, achieving sub-**10ms** latency.

- Programmed two operational modes: **Controller** for transmitting data, and **Device** for receiving it using **EEPROM**.
- Created a command-line interface for real-time interaction via **PuTTY**.

**Red-Blue Nim with Alpha-Beta Pruning** | *Python, Minimax Algorithm* May 2023 – Jun 2023

- Designed a two-player marble game in Python where players compete to win by removing marbles from piles.
- Implemented the **Minimax Algorithm** with **Alpha-Beta Pruning** to optimize move decisions and boost efficiency.
- Developed the `calculate_game_score` function to assess game states, incorporating a random factor for unpredictability.
- Managed game flow through the `main` function, alternating between human and computer players, and controlling parameters.
- Tested and validated the game in Python 3.10.11, ensuring compatibility and smooth execution across setups.
- Introduced two game modes: **Standard** (lose if a pile is empty) and **Misere** (win if a pile is empty), enhancing replayability.

## Certifications

**Oracle Cloud Infrastructure 2024 Generative AI Professional** *Jul 2024*

**AWS Certified Solutions Architect – Associate** *May 2024*

**J.P.MORGAN Chase AGILE Job Simulation On FORAGE** *Oct 2023*

**J.P. MORGAN Chase Software Engineering Virtual Experience On FORAGE** *Sep 2023*