Gopikrishna Venigalla

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ABOUT ME

Dedicated and responsible fourth-year Computer Science student with a solid foundation in programming, data structures, and algorithms. Proficient in Java, Python, and SQL, with hands-on experience in building web-based and data-driven applications. Passionate about learning emerging technologies and solving real-world problems with a proactive mindset. Recognized for adaptability, collaboration, and the ability to take initiative in team settings. Actively seeking industry exposure to apply and expand technical skills in a dynamic work environment.

EDUCATION

Gokaraju Rangaraju Institute of Engineering and Technology — *Nov 2022 – July 2026 (Expected)*
B.Tech in Computer Science, CGPA: 8.93 — Hyderabad, Telangana, India

Sri Chaitanya Junior College — *June 2020 – May 2022*
Intermediate – MPC, Percentage: 96.4% — Hyderabad, Telangana, India

Sri Raos High School — *June 2010 – March 2020*
Secondary School, GPA: 10.0 — Hyderabad, Telangana, India

TECHNICAL SKILLS

- **Programming Languages:** Python, Java, C, JavaScript, SQL
- **Software Development:** Object-Oriented Programming (OOP), Secure Coding Practices.
- **Web Development:** Django (MVT), Flask, Streamlit, React.js, HTML, CSS, Js, PostgreSQL, MongoDB
- **Data Structures & Algorithms:** Problem Solving, Algorithm Design, Optimization
- **Machine Learning:** AI/ML Fundamentals, Deep Learning (TensorFlow), Artificial Intelligence
- **Database Management:** SQL, Relational Databases, Query Optimization
- **Computer Science Fundamentals:** OOP Concepts, DBMS, Operating Systems, Computer Organization

PROJECTS:

ENHANCING ATHLETIC ANALYSIS:

- Built a real-time action recognition system to detect boxing moves like jabs, hooks, and blocks using webcam or uploaded video.
- Developed a Flask app with OpenCV and TensorFlow Lite for pose detection, and used a Keras-based CNN for action classification.
- Implemented multi-threading for smooth video processing, Tkinter for video selection, and JSON for user data handling.
- **Use Case:** Assists athletes and coaches with instant feedback during practice by visually identifying actions and improving technique.
- **Tech Stack:** Python, Flask, OpenCV, TensorFlow Lite, Keras, NumPy, HTML/CSS, JavaScript, Tkinter, JSON
- (Code Repository)

STUDENT FEE MANAGEMENT SYSTEM:

- Developed a Django-based web system to manage student profiles, fee transactions, and administrative tasks in educational institutions.
- Implemented session-based login, fee history tracking, concessions, and photo uploads for a smooth and secure user experience.
- Built responsive UI using Django templates, Bootstrap, and JavaScript, integrated with SQLite for data storage.
- **Use Case:** Simplifies fee collection and student record management for school and college administrators, reducing paperwork and improving accuracy.
- **Tech Stack:** Python, Django (MVT), SQLite, HTML, CSS, JavaScript, Bootstrap
- (Code Repository)

AI-POWERED GEOSPATIAL ANALYSIS FOR ENVIRONMENTAL TRANSFORMATION:

- Designed a geospatial analysis system combining Gemini, Mistral, and Google Earth Engine to monitor environmental changes using satellite imagery.
- Implemented a natural language chatbot with Streamlit to let users explore land cover trends through dynamic GEE maps and interactive charts.
- Analyzed Sentinel-2 and Dynamic World datasets to generate visual insights on deforestation, urbanization, and land transformation.
- **Use Case:** Assists researchers, urban planners, and policymakers in understanding environmental changes and making data-driven decisions.
- **Tech Stack:** Python, Streamlit, Google Earth Engine, Gemini AI, Mistral, Matplotlib, Geemap, Sentinel-2, Dynamic World
- (Code Repository)

Virtual Internships and Workshops

- **Google AI-ML Virtual Internship** – Learned how computers can be trained to recognize patterns and make decisions using data. Worked on simple projects using AI tools to understand how real-world problems can be solved with technology.
  Certificate Link
- **AWS Cloud Virtual Internship** – Completed a hands-on internship focused on cloud computing fundamentals, services like EC2, S3, Lambda, and serverless architecture using AWS. Gained practical exposure to deploying applications on AWS cloud infrastructure.
  Certificate Link

Certifications

- **Smart Interviews – Course Completion Certificate**
  Completed a rigorous coding and problem-solving training program focused on data structures, algorithms, and interview preparation.
  Certificate Link
- **CCNA: Introduction to Networks – Cisco Networking Academy**
  Gained foundational knowledge in networking concepts including OSI model, IP addressing, routing protocols, and network security fundamentals.
  Certificate Link
- **Java (Basic) Certification – HackerRank**
  Demonstrated proficiency in core Java concepts such as object-oriented programming, control structures, data types, and exception handling.
  Certificate Link
- **Data Analytics with Python – NPTEL (12-week course)**
  Completed a comprehensive course covering Python for data analysis, statistics, visualization, and machine learning techniques using real-world datasets.
  Certificate Link