Ramgopal Hariharan

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GitHub

EDUCATION

Vellore Institute of Technology, Vellore — **Vellore, Tamil Nadu**
BTech in Computer Science and Engineering — *Expected Graduation: 2024*
CGPA: *8.94*

Delhi Public School, Coimbatore — **Coimbatore, Tamil Nadu**
Central Board of Secondary Education — *Graduation Year: 2018*
Class X (CBSE): *93.00%*

Delhi Public School, Coimbatore — **Coimbatore, Tamil Nadu**
Central Board of Secondary Education — *Graduation Year: 2020*
Class XII(CBSE): *95.00% (Physics, Chemistry, Mathematics and Computer Sc.)*

CERTIFICATIONS

AWS Solutions Architect Associate Certified — **July 2023 - 2026**

- Successfully passed the AWS Solutions Architect Associate Examination, demonstrating proficiency in designing and deploying scalable and reliable applications on the AWS cloud platform.
- Acquired in-depth knowledge of various AWS services, including compute, storage, databases, networking, and security, highlighting expertise in architecting robust and cost-effective solutions.
- Demonstrated competence in cloud cost optimization, ensuring efficient resource utilization and cost-effective cloud solutions.
- Proactively pursued continuous learning and professional development, staying up-to-date with the latest cloud computing trends and advancements.

PROJECTS

Web Application for MFCC-based Recurrant Neural Network for Automatic Depression Detection — *2023*

Technologies Used – *Python [Juptyr Notebook], Librosa, Tensorflow, Node JS, React Js, CSS*

Architecture:

- Implemented a seamless web application employing Python, Node.js, and React.js to provide a user-friendly interface for depression assessment.
- Successfully trained the deep learning model on the challenging DIAC-WOZ dataset, demonstrating expertise in data preparation and model development.
- Showcased strong problem-solving skills by addressing complex challenges in speech processing and achieving high accuracy in depression assessment.
- Collaborated with a team to ideate, design, and develop the application, showcasing excellent teamwork and communication skills.

Timetable Generator Using Genetic Algorithm — *2022*

Technologies Used- *Python, Tensorflow, Librosa, ReactJS, Node JS, Tailwind*

- Designed and implemented a robust Python backend capable of executing the Genetic Algorithm, ensuring efficient timetable generation by considering various constraints and preferences.
- Utilized Genetic Algorithm's evolutionary principles to intelligently search for the best timetable configurations, taking into account course preferences, time slot availability, and potential clashes.
- Successfully handled complex scheduling scenarios, such as overlapping courses, limited resources, and individual course priority settings, enhancing the application's usability and adaptability.

Task Manager — *2023*

Technologies Used: Node.js, Express.js, Angular, Mongo DB

Architectures Used: Node.js, Express.js and JavaScript-based Architecture

- Designed and implemented the user interface using AngularJS and Bootstrap, providing an intuitive and responsive user experience.
- Implemented the server-side logic and data handling using the MVC architecture, utilizing MongoDB as the database to store users, task lists, and tasks efficiently.
- Integrated Bcrypt for secure user authentication, protecting user credentials from unauthorized access.
- Implemented JWT-based session cookies with timeout functionality to manage user sessions effectively.

Asteroid Game using `Processing3` — *2023*

Technologies Used: Processing3, Java, Game Development

- Designed and coded the game mechanics, including player movement, asteroid generation, and collision detection using the Processing3 library..
- Implemented scoring mechanisms and level progression to increase the game's challenge and replay value..
- Demonstrated problem-solving skills in overcoming challenges related to game physics and user input..
- Creating modular components for Header, AddContact, ContactList, and ContactDetail. (Repository)

TECHNICAL SKILLS

Java | C++ | MySQL | HTML | CSS | JavaScript | DSA | Word | processing3 [Java Based Graphics Library] | Full Stack Web Development | Python | MongoDB | RapidAPI

OTHER SKILLS

Public Speaking | Story Writing | Karate | Keyboard |

LANGUAGES SPOKEN

English (Native) | Tamil (Native) | Japanese (Limited Working Proficiency)

ACHIEVEMENTS / POSITIONS HELD

12th grade Class Representative (2019 - 2020)

IEEE Techloop Club Core Member (since 2022)