# Chebrolu Sai Prasanna Abhinav

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## EDUCATION

*2020-2024* **VELLORE INSTITUTE OF TECHNOLOGY** *Vellore, IN*
*Bachelor of Technology, Computer Science and Engineering; Cumulative GPA:* ***9.07/10***

- ***Awards***: Schneider Electric Scholarship.
- ***Leadership***: Member Secretary, Student Council; Placements Co-Ordinator; Photography Club (Co-Secretary)
- Software Engineering; Operating Systems; Algorithms; Artificial Intelligence; Database Systems.

*2020* **FIITJEE JUNIOR COLLEGE** *Vijayawada, IN*
*BIEAP - CGPA:* **8.88/10.0.**

*2018* **SRI CHAITANYA HIGH SCHOOL** *Addanki, IN*
*BSEAP - CGPA:* **10.0/10.0.**

## WORK EXPERIENCE

**AMBIENT-BASED SMART HOME WITH EMOTIONAL INTELLIGENCE** *Vellore, IN*
***Developer, Intern***

- Built an AI system with an 82% success rate that accurately detects vocal and facial expressions, analyzes user emotions, and sends the collected data to a central gateway for optimization.
- Conducted data analysis on reviews and created algorithms to identify and present the most relevant information, resulting in a 50% improvement in course accuracy.

**LG CLOUD-BASED STREAMING PLATFORM** *Vellore, IN*
***Executioner*** *(on behalf of the college)*

- Results in scalability, reliability, and elasticity. Managed data with webRTC - a centralized transform (performed by Kubernetes engine, microservices, and deployment strategies). Using a multi-cloud environment helps with cost-optimization with 35% and low latency.
- Created a web application that increased user engagement by 40% by providing personalized recommendations based on individual interests and performance.

**VELLORE INSTITUTE OF TECHNOLOGY** *Vellore, IN*
***Developer***

- Overhauled the web portal to improve user experience, reducing reading time by 40% and increasing the cut-point by 60%, while also transitioning from an on-demand system to cloud-based infrastructure.
- Designed a scalable full-stack web application using the MERN stack to support 2,000+ users; mobilized page load time by 50%.
- Developed and implemented a Python script that streamlined the certificate generation and transmission process, resulting in a 40% improvement in efficiency with parallel algorithms to compute faster.

## UNIVERSITY PROJECTS

**MULTI-ROUND SECURE AGGREGATION BY SOUND FOR SYSTEM CHECK USING FEDERATED LEARNING** *2023*
**PROJECT | SOURCE CODE**

- Executed a Machine Learning algorithm that captured noise from IoT devices, reducing maintenance by 40% and improving equipment uptime by 30% through Federated Learning on AWS Cloud
- Researched modulation dots and signal processing techniques to optimize sound signal transmission to the central server, resulting in an 80% connection rate increase.
- Handled TensorFlow for transparency and described how data moves through a graph. The test accuracy is 76.92%

**PERSONALIZED HOME SCREEN FOR GOOGLE CHROME | SOURCE CODE** *2023*

**DEEP LEARNING BASED AUTOMATED IMAGE TRANSLATION FOR ANALYSIS AND DETECTION OF MALWARE IN REAL-TIME SYSTEMS – PROJECT | SOURCE CODE** *2022*

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- Implemented novel image processing techniques that identified and classified specific virus strains using CNN; archived accuracy by 20% and reduced false-positive rate by 45%.
- Contributed to Image segmentation, morphological analysis techniques, and detection of viruses using DL algorithms and achieved 98.5% accuracy.

**GONAV: AI-BASED TRAVEL PLANNER AND GUIDER – PROJECT** 2022

## OTHER

- **Achievements:** Winner at LG Hacks for Ambient based intelligent home systems
- **Languages**: English (Fluent), Telugu (native), Hindi (intermediate), French (Foreign Language)
- **Coding Skills**: Python, Java, C/C++.
- **Cloud architecture and development**: AWS, Azure, Google Cloud Platform
- **Cyber/info security**: Penetration testing, vulnerability assessment, network security
- **Artificial intelligence and machine learning**: Python, TensorFlow, Keras, sci-kit-learn
- **Data analysis**: MATLAB, Python, R, SQL, Tableau, Power BI, Flourish Studio, ZOHO.
- **Graphic design**: Photoshop, Illustrator, Figma
- **Full-stack development**: MERN stack (MongoDB, Express, React, Node.js), HTML, CSS, JavaScript
- **Certifications**:
  AWS Solution Architect (Ongoing), IBM-AI Analyst, AWS Cloud Practitioner, Microsoft Azure Fundamentals (AZ-900), Azure AI Fundamentals (AI-900), Azure Data Fundamentals (DP-900), Azure Security Compliance and Identify Fundamentals (SC-900), Google Digital Marketing, Big Data – UCSanDiego, MATLAB (Fundamentals, Onramp, Programming Techniques), Salesforce Administrator, Hackerrank (Competitive Solving, Python)
- **Volunteering**: Volunteered most of the college events and led the Riviera 2023 – Annual Sports and Cultural Fest of VIT, Vellore.

## PATENTS

**BANDWIDTH-BASED AUDIO AND VIDEO SPLITTING** *Sept 2022 – Filed Patent under Indian Patent*

- Splitting of audio and video as different instances in the cloud
- Transmitting audio when low bandwidth upgrades by disabling video.

## RESEARCH PAPERS

**SOFTWARE DEFECT DETECTION AND PREVENTION IN AGILE BASED PROCESS USING ARTIFICIAL LEARNING METHODS**
*Guided by Prof. Manikandan N, Prof. Ruby D, Prof. Gayathri A.* *2022*

**DEEP LEARNING BASED AUTOMATED IMAGE TRANSLATION FOR ANALYSIS AND DETECTION OF MALWARE IN REAL-TIME SYSTEMS** *2022*
*Stimulated with Prof. Manikandan N, Prof. Ruby D.*

**ABNORMAL FEATURE EXTRACTION FROM EEG OF SCHIZOPHRENIA PERSON WITH SWT** *2022*
*Handled with Prof. Gopinath MP and Prof. Aarthy SL.*