

# Chebrolu Sai Prasanna Abhinav

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## EDUCATION

2020-2024	<b>VELLORE INSTITUTE OF TECHNOLOGY</b> <i>B.Tech, Computer Science and Engineering; Cumulative GPA: 9.05/10</i> <ul style="list-style-type: none"><li>• <b>Awards:</b> Schneider Electric Scholarship.</li><li>• <b>Leadership:</b> Member Secretary, Student Council; Placements Co-Ordinator;</li><li>• <b>System Design:</b> Software Engineering; Operating Systems; Algorithms; AI; Database Systems.</li></ul>	Vellore, IN
2020	<b>FIITJEE JUNIOR COLLEGE</b> <i>BIEAP - CGPA: 8.88/10.0.</i>	Vijayawada, IN
2018	<b>SRI CHAITANYA HIGH SCHOOL</b> <i>BSEAP - CGPA: 10.0/10.0.</i>	Addanki, IN

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## WORK EXPERIENCE

### SMART HOME SYSTEM UTILIZING AMBIENT INTELLIGENCE WITH EMOTIONAL AWARENESS 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.
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## 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%

### AWS BASED REALTIME CCTV MONITORING SYSTEM 2023

- Enhanced using RTSP-Protocol (*IoT-TwinMaker, IoTGreenGrass, Kinesis-Video-Stream, IoT-SiteWise, Grafana, Elemental Live Storage*)

<b>PERSONALIZED HOME SCREEN FOR GOOGLE CHROME   SOURCE CODE</b>	2023
<b>DEEP LEARNING BASED AUTOMATED IMAGE TRANSLATION FOR ANALYSIS AND IMAGE BIND TECHNIQUES TO TRANSLATE – PROJECT   SOURCE CODE (1)   (2)</b>	2022
<ul style="list-style-type: none"> <li>• 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%.</li> <li>• Contributed to Image segmentation, morphological analysis techniques, and detection of viruses using DL algorithms and achieved 98.5% accuracy.</li> </ul>	
<b>GO NAV: AI-BASED TRAVEL PLANNER AND GUIDER – PROJECT   LIVE</b>	2022

## SKILLS

- **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
- **Development:** DevOps, Agile (Scrum, XP)
- **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 Developer Associate, AWS Solution Architect, IBM-AI Analyst, Microsoft Azure Solution Architect Exert (AZ-305), Meta Full Stack Development, Azure AI Fundamentals (AI-900), Azure Security Compliance & Identify Fundamentals (SC-900), Big\_Data(UC SanDiego & Microsoft Azure Data Fundamentals) Google Digital Marketing, MATLAB, Certified Applied AI & AI-Engineering Professional.
- **Volunteering:** Volunteered most of the college events and led the Riviera 2023 – Annual Sports and Cultural Fest of VIT, Vellore.

## PATENTS

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|--|---|
| <b>BANDWIDTH-BASED AUDIO AND VIDEO STREAMING</b>   | <i>Sept 2022 – Filed Patent under Indian Patent</i> |
| <ul style="list-style-type: none"> <li>• Splitting of audio and video as different instances in the cloud</li> <li>• Transmitting audio when low bandwidth upgrades by disabling video.</li> </ul> |   |

## RESEARCH PAPERS

<b>SOFTWARE DEFECT DETECTION AND PREVENTION IN AGILE BASED PROCESS USING ARTIFICIAL LEARNING METHODS</b>	
<i>Guided by Prof. Manikandan N, Prof. Ruby D, Prof. Gayathri A.</i>	2022
<b>DEEP LEARNING BASED AUTOMATED IMAGE TRANSLATION FOR ANALYSIS AND DETECTION OF MALWARE IN REAL-TIME SYSTEMS   SOURCE CODE</b>	
<i>Stimulated with Prof. Manikandan N, Prof. Ruby D.</i>	2022
<b>ABNORMAL FEATURE EXTRACTION FROM EEG OF SCHIZOPHRENIA PERSON WITH SWT</b>	
<i>Handled with Prof. Gopinath MP and Prof. Aarthy SL.</i>	2022

## PASSPORT & ADDRESS

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*Expires On:* 27/03/2032

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