SURIYA CHELLAPPAN

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EDUCATION

- **San Jose State University, California** — Aug 2024 - May 2026
  Master of Science in Engineering — CGPA: 3.4/4
  Specialization: AI/ML & Cloud Technologies
- **Anna University, Chennai, India** — Nov 2020 - April 2024
  Bachelor of Technology in Information Technology — CGPA: 9.32/10

EXPERIENCE

- **Student Assistant, 3D Unity Development, San Jose State University, CA** — *Jan 2025 - Present*
  - Developed interactive **3D simulation models** in Unity, integrating precise controls for realistic user experiences.
  - Improved rendering performance and physics interactions, increasing **frame rates by 20%**.
- **Member, Machine Learning SJSU Club, San Jose State University, CA** — *Aug 2024 – Present*
  - Developed an **audio-based multimodal ML model** using stacked ensemble methods, improving smart home voice command recognition by **25%**.
  - Applied information-theoretic tools to compress RL state spaces, enhancing policy interpretability and generalization using unsupervised learning techniques.
- **Data Analyst Intern — E-Parisaraa Pvt. Ltd., Bangalore, India** — *May 2023 – Nov 2023*
  - Improved material recovery accuracy by **20%** by analyzing live crushing and dismantling data using **Python** and **SQL**.
  - Created interactive **Tableau dashboards**, reducing reporting time by **40%** and accelerating high-value batch decisions.
  - Built predictive models for yield forecasting, increasing revenue per batch by **12%** and profit margins by **9%**.

SKILLS

- **Programming Languages:** C, C++, Python, Java, JavaScript, SQL, R
- **AI/ML:** Pandas, Keras, Scikit-Learn, TensorFlow, PyTorch, OpenCV, NLP, MLOps, LLM, CUDA, Transformers
- **Frameworks:** Flask, ReactJS, NextJS, Flutter, Git, Streamlit
- **Developer Tools:** Docker, Kubernetes, CI/CD Pipelines (Jenkins, GitHub Actions), Jira, Ffmpeg
- **Technologies:** AWS, GCP, Azure, Mysql, MongoDB, PostgreSQL, Unity, Blender

PROJECTS

- **AI-Based Financial News Analyzer for Stock Prediction** — *Nov 2024 – Jan 2025*
  - Developed a Transformer-driven NLP model to assess financial news sentiment and accurately predict stock prices.
  - Boosted prediction accuracy by **20%** via integration of historical data using **TensorFlow**, then deployed on **AWS Lambda**.
  - Created a **React** dashboard serving 500+ active users, offering real-time market insights.
- **AI-Based Energy Consumption Optimizer for Smart Homes** — *Sep 2024 – Nov 2024*
  - Built an **LSTM**-based predictive model to optimize IoT-driven energy usage, reducing consumption by **15%**.
  - Deployed via **AWS IoT Core** for real-time monitoring and control through a **Flutter** mobile application.
- **SecureMed – GAN-Based Video/Image Steganography for Medical Data** — *Mar 2024 – May 2024*
  - Implemented a **GAN**-powered system embedding 100+ sensitive medical records in images and videos securely.
  - Employed hybrid cryptosystems and post-quantum cryptography to maximize capacity and confidentiality.
  - Utilized **PyTorch**, **Flask**, and **FFmpeg** for seamless retrieval and reliable deployment.
- **AI-Based Personalized Learning Platform** — *Jan 2024 – Mar 2024*
  - Developed an intelligent recommendation engine leveraging **NLP** and collaborative filtering to enhance engagement.
  - Deployed a scalable backend using **Flask** and **MongoDB**, delivering personalized learning pathways.
- **IntelliNews – AI-Based Personalized News Aggregator** — *Dec 2022 – Feb 2023*
  - Engineered a tailored news platform using **NLP** (**SpaCy**, **NLTK**) and collaborative filtering within a **Flask** + **MongoDB** stack.
  - Increased user retention by delivering precisely targeted news recommendations.
- **Real-Time Speech Emotion Recognition System** — *Oct 2023 – Dec 2023*
  - Built a **CNN-RNN** solution for real-time emotion classification from audio, achieving **85%** accuracy.
  - Enabled browser-based interfaces for on-the-spot emotion insights in live interactions.
- **Cloud-Based Code Translation Tool** — *Jul 2023 – Sep 2023*
  - Designed a multilingual code translation platform using Transformer-based architectures.
  - Efficiently deployed with **Flask** and **MongoDB**, ensuring cost-effective scaling.

CERTIFICATIONS

- **Google Data Analytics** — *Aug 2023*
- **Java Full Stack - Wipro** — *May 2023*
- **Google IT Automation in Python** — *Sep 2022*