

# Sravya Yepuri

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## SKILLS

- **Programming Languages:** Python, Java, TypeScript, JavaScript, SQL, Bash, C, R, Ruby on Rails
- **Frontend:** React, Next.js, Tailwind CSS, Material UI, Zustand, Vite, Redux Toolkit, Vue.js
- **Backend:** Node.js, Express.js, Flask, GraphQL, REST APIs, tRPC
- **Cloud & DevOps:** Docker, Kubernetes, AWS (EC2, S3, IAM, Lambda), GCP (Cloud Run, Firestore), GitHub Actions, Vercel
- **Machine Learning & AI:** PyTorch, OpenCV, NLP, OpenAI API, LangChain, RAG, Scikit-learn, TensorFlow, Hugging Face, OCR
- **Monitoring & Testing:** Postman, PyTest, Playwright, Prometheus, Grafana, Swagger

## EDUCATION

**North Carolina State University** - Raleigh, United States

Aug 2023 – May 2025

- Master of Computer Science, CGPA: 3.9/4.00
- Coursework: Automated Learning and Data Analysis, Database Management Concepts and Systems, Design and Analysis of Algorithms, Computer Networks, Cloud Computing, Neural Networks, Parallel Systems
- Teaching Assistant for Courses: Artificial Intelligence for Engineering Applications (MAE 495 and 589), Graph Theory (CSC 565)

**PES University** - Bengaluru, India

Aug 2019 – Jul 2023

- Bachelor of Technology in Computer Science and Engineering, CGPA: 8.91/10.00
- Coursework: Machine Intelligence, Operating Systems, Big Data, Network Analysis and Mining, Software and Systems Performance, Microprocessors

## PROFESSIONAL EXPERIENCE

**Software Development Engineer I**, Applied Contexts Consulting, Raleigh, USA

Jul 2025 – Present

- Developed full-stack enterprise document processing platform using Nuxt 3 (Vue.js), Tailwind CSS frontend with Encore.dev microservices backend, TypeScript, Node.js, and PostgreSQL, implementing scalable ML pipelines for high-volume data processing.
- Engineered end-to-end LLM integration workflows using Anthropic Claude API, LangChain framework, and Langfuse observability, building responsive UI components with real-time data visualization and server-side rendering optimization.
- Designed Model Context Protocol (MCP) servers with RESTful APIs and WebSocket integration, implementing AI agent workflows with Vue.js state management (Pinia), TanStack Query for data synchronization, and agentic development using Claude Code.
- Built distributed full-stack ML inference architecture with event-driven microservices, LangChain agent workflows, vector storage, and real-time frontend updates using server-sent events for automated monitoring and performance tracking.

**Web Development Intern**, National Aerospace Laboratories, CSIR, Bengaluru, India

May 2024 – Jun 2024

- Developed interactive frontend modules using HTML, CSS, JavaScript, and Canvas API, boosting user engagement metrics by 18%.
- Implemented object positioning algorithms with triangulation techniques, optimizing system accuracy by 15%.

**Cloud Developer Intern**, Hewlett Packard Enterprise, Bengaluru, India

Jan 2023 – Jul 2023

- Monitored and analyzed cloud microservices logs in Compute Ops Management (COM) using Humio Dashboard, ensuring system reliability, and reducing downtime by 12%.
- Developed & validated REST API test cases, improving change propagation & cloud service reliability in HPE GreenLake, OneView, and Kafka.
- Streamlined cloud provisioning and performance monitoring with Python, Bash, and DevOps automation tools, reducing provisioning times.

**Research and Development Intern**, Fourth Paradigm Institute, CSIR, Bengaluru, India

Jun 2022 – Aug 2022

- Developed deep learning models (CNN, AlexNet, ResNet) for AML and NHL classification, achieving 89% accuracy.
- Enhanced model performance through transfer learning, hyperparameter tuning, and data augmentation. Optimized image preprocessing using noise reduction and morphological operations for improved feature extraction.
- Research Published: [“Classification of Blood Cell Data using the Deep Learning Approach”](#), IITCEE Conference, BNMIT University.

**Research and Development Intern**, National Aerospace Laboratories, CSIR, Bengaluru, India

Jan 2022 – Feb 2022

- Implemented real-time fatigue detection system using OpenCV and Dlib, analyzing PERCLOS, MOR, and HBR metrics, achieving 90% accuracy.
- Designed eyelid movement and head posture analysis algorithms, refining fatigue detection precision.

## PROJECTS

**StoryTube: Generating 2D Animation for a Short Story** - Python, Stanford NLP, AllenNLP, CARDINAL, NetworkX, OpenCV

- Built text-to-animation pipeline leveraging NLP (Stanford NLP, AllenNLP) for coreference resolution, dependency parsing, and clause extraction.
- Developed graph-based scene representation with NetworkX, modeling character interactions and scene transitions for automated animation.
- Integrated OpenCV for rendering, converting structured narratives into dynamic 2D visual sequences with automated object placement.
- Research Published: [“StoryTube: Generating 2D Animation for a Short Story”](#), 3rd ICCIKE 2023, Amity University, Dubai.

**EduGrow** - React, Node.js, Express.js, MongoDB, RESTful APIs, NLP, JavaScript, HTML5, CSS3

- Developed an interactive educational platform with React.js for dynamic rendering and seamless UI navigation.
- Built RESTful APIs using Express.js and Node.js, enabling efficient client-server communication.
- Designed and optimized MongoDB schema for secure storage of user profiles, progress tracking, and educational content.
- Integrated NLP-powered chatbot to assist users in navigating the platform. Deployed and optimized application for performance and scalability.

**Restaurant Pre-ordering and Management System** – Java, Java Swing, UML, SQL

- Developed a Java application using MVC architecture for restaurant pre-ordering, featuring secure user registration, login, and role-based access.
- Integrated dynamic menu exploration with advanced filtering, cart management, real-time order tracking, and seamless payment processing.
- Enhanced owner management with functionalities for menu updates, cooking time adjustments, performance metrics tracking (revenue, profit, loss), and customer feedback integration.

**PESUVariance** - Python, Flask, PostgreSQL, Psycopg2, HTML, CSS, JavaScript, RESTful APIs, DB Schema Optimization

- Engineered a full-stack application using Flask with RESTful API endpoints, integrating PostgreSQL via Psycopg2 for dynamic SQL operations.
- Developed responsive UI components with HTML, CSS, and JavaScript, implementing rigorous client-side validation for user registration, quizzes, competitions, and contact forms.
- Conducted performance analysis and evaluated NoSQL migration (MongoDB) for advanced indexing and hierarchical data handling.