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# CHEEDELLA SIVA SAI JAHNAVI

**Portfolio:** https://jahnavicheedella.github.io/jahnavi-portfolio/
**GitHub:** https://github.com/JahnaviCheedella

Frontend React Developer & Generative AI Enthusiast with hands-on professional experience. Skilled in **React JS, Redux, TypeScript, JavaScript, HTML5, CSS3 and REST APIs**, I excel in crafting responsive, accessible, and engaging web interfaces with a focus on design and performance across devices. With expertise in **Generative AI, Prompt and Context Engineering**, and building models from scratch using **PyTorch**, I **leverage RAG (Retrieval-Augmented Generation)**, **LangChain, PyTorch, Pandas, and NumPy** to create innovative AI-driven features that enhance user interaction and automate complex tasks. Eager to contribute my blend of creativity, technical skill, and curiosity to modern **frontend** and **intelligent application projects**.

## Technical Skills

- **Frontend**: HTML5, CSS3, JavaScript (ES6+), TypeScript, React JS, Redux, REST APIs (integration & consumption)
- **AI/ML:** Python, NumPy, Pandas, PyTorch, NLP, Generative AI, RAG (Retrieval-Augmented Generation), Prompt & Context Engineering, LangChain
- **Other Tools**: GitHub, Linux, Label Studio
- **Soft Skills**: Analytical thinking, Problem-solving, Communication, Leadership

## Experience

### React & Generative AI Developer / TrueID, Hyderabad
**OCTOBER 2024 – PRESENT**

- Develop responsive, high-performance web applications using React, TypeScript, and Redux, ensuring clean architecture and accessibility.
- Implement Redux for efficient state management and TypeScript for type-safe, maintainable code.
- Enhance UI/UX with modern design patterns, optimizing performance and adhering to accessibility best practices.
- Build intelligent automation workflows using Generative AI, NLP, and LangChain for context-aware solutions.
- Applied Prompt & Context Engineering to optimize AI interactions and enhance model understanding in automation projects.

### React JS Intern / TrueID, Hyderabad
**JULY 2024 – SEPTEMBER 2024**

- Built and optimized reusable UI components with React JS, focusing on responsive design and modern hooks.
- Integrated APIs and third-party libraries to enhance application functionality and performance.
- Collaborated in agile teams through code reviews and sprint planning, improving UI efficiency.
- Applied best practices for maintainable, accessible, and performance-optimized code.

### UI Developer Intern / BVM CS IT Services, Hyderabad
**JUNE 2024 – JULY 2024**

- Created semantic HTML5 structures and responsive CSS3 layouts for pixel-perfect static websites.
- Applied mobile-first design, typography, and spacing to ensure cross-device compatibility.
- Mastered web development fundamentals, including box model, positioning, and media queries.
- Ensured accessibility and clean design through best practices in semantic markup.

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## Projects

### IDM Demos | Frontend

**Technologies:** React JS

Contributed to the development of UI for IDM demos application, focusing on building user-friendly and visually appealing interfaces. Collaborated with product and design teams to deliver intuitive flows and seamless user experiences. Integrated real-time functionalities to showcase capabilities of identity verification using auto document capture and auto face capture.

- Developed a modern UI design system to ensure visual consistency and improve usability across demo applications.
- Integrated automatic document capture functionality using Innovatrics.
- Integrated automatic face capture using Innovatrics.
- Built interactive components such as stepper, capture previews, and progress indicators to guide users.
- Added user engagement features like success dialog for better UX.
- Designed and developed responsive layouts to ensure cross-device compatibility on desktops, tablets, and mobile phones.

### RAG Q&A Chatbot | Full Stack

**Technologies:** React JS, Python, Flask, LangChain, FAISS, HuggingFace

Built a **Retrieval-Augmented Generation (RAG) chatbot** that answers questions from external knowledge sources (e.g., Wikipedia, URLs, PDFs, databases). Integrated prompt engineering and external knowledge retrieval to ensure **accurate and up-to-date answers**.

- Developed a responsive chat UI in React, optimized for desktop and mobile devices.
- Flask backend APIs to serve LLM responses.
- Integrated LangChain + FAISS for document retrieval and semantic search.
- Applied HuggingFace models (Flan-T5 + Sentence Transformers) for embeddings and Q&A.
- Uses Prompt Engineering to ensure accurate, controlled, and non-hallucinated responses.

### Clustering | Frontend

**Technologies:** React JS, Redux

Developed dynamic and interactive UI components using React and Redux, enabling seamless state management across the application. Focused on building reusable components and structured state logic to ensure scalability. Enhanced the user experience by implementing smooth loading transitions using skeletons.

- Implemented Redux for effective state management and predictable data flow across components.
- Developed modular UI components to promote reusability and maintainable design architecture.
- Integrated Material UI Skeleton loader to improve user experience during data fetch and render delays.
- Built interactive UI elements like expandable lists and filters to enhance usability and engagement.

### Acquiring | Frontend

**Technologies:** React, Typescript, Redux

Engineered robust UI components using React and TypeScript to improve reliability and maintainability of the frontend. Emphasized type safety and clear interfaces to prevent runtime errors and improve developer productivity. Leveraged Redux for structured global state handling.

- Built modular and maintainable UI components aligned with project standards and design system.
- Applied TypeScript to ensure strong typing and avoid runtime issues through compile-time checks.
- Wrote type-safe and scalable code with clear interface definitions and consistent prop typing.
- Utilized modern React practices such as hooks, functional components, and context-driven state management.

### KYC Update Portal | Frontend

**Technologies:** React JS, Redux

Led UI enhancements and integrated new functionalities for the KYC update portal using React JS and Redux. Integrated auto document capture and auto face capture using Innovatrics. Improved performance and user satisfaction through optimized components and responsive layouts.

- Built modular UI components to streamline KYC processes and improve user navigation.
- Integrated Innovatrics for automatic document capture to eliminate manual uploads and speed up verification.
- Implemented automatic face detection and capture using Innovatrics SDK for secure and fast onboarding.
- Enhanced user experience with clean design, intuitive flow, and feedback mechanisms.
- Optimized React components for better performance and reduced re-renders.
- Designed responsive layouts ensuring consistent behavior across desktops, tablets, and mobile devices.

### TrueID Image Verification Portal | Frontend

**Technologies:** React JS

Developed dynamic and interactive UI components using React and Redux, enabling seamless state management across the application. Focused on building reusable components and structured state logic to ensure scalability. Enhanced the user experience by implementing smooth loading transitions using skeletons.

- Created a user-friendly image upload interface with drag-and-drop and preview capabilities.
- Integrated real-time REST APIs to analyze uploaded images and return verification results.
- Displayed clear feedback labels such as 'AI-Generated' or 'Real Image' based on analysis response.
- Built responsive design to support seamless usage across devices and screen sizes.

### Custom Object Training and Segmentation for Drone Imagery Using YOLO Model | AI/ML

**Technologies:** Label Studio, E2ENetworks TIR, Python, YOLO

Trained a customized YOLOv11x model for object segmentation on drone imagery, targeting features such as multi-storey buildings, road width, curvature, trees, pedestrians, dividers, footpaths, parked vehicles, guardrails, and solid/dashed lines. Leveraged segmentation masks annotated in Label Studio and executed model training and prediction on GPU servers.

- Used advanced annotation with segmentation masks for precise object labeling via Label Studio.
- Exported and prepared masked datasets for training YOLOv11x on custom drone imagery.
- Utilized pretrained YOLOv11x model, fine-tuned on E2ENetworks GPU instances for high-performance computation.
- Focused segmentation on diverse, domain-specific categories relevant to road and urban analysis.
- Deployed trained model for accurate real-time segmentation and detection in aerial drone images.

### Training and prediction of AI Deepfake Vs Real face image detection model | AI/ML

**Technologies:** Linux, GitBash GUI, Python

Developed a customized model using a pre-trained Vision Transformer to detect and classify deepfakes, AI-generated images, face morphs, face swaps, and digitally injected faces. Implemented with PyTorch in Python, with training and inference executed on AWS GPU instances for efficient computation and accurate real-time detection.

- Customized classification for detecting AI-generated vs. real images, including deepfakes, morphs, swaps, digitally injected faces, and duplicate image identification.
- Utilized pre-trained Vision Transformer architecture for enhanced detection accuracy and robust image analysis.
- Leveraged AWS GPU instances for server deployment, management, training, inference, and server-side image processing.
- Incorporated Linux command-line tools for efficient image analysis and processing workflows.
- Employed GitBash scripting for automation of tasks, streamlining development and deployment processes.

### Sentiment Analysis Classifier for IMDb Movie Reviews | AI/ML

**Technologies:** Python, Pandas, PyTorch, NLP

Developed and trained a Long Short-Term Memory (LSTM) neural network from scratch using PyTorch to classify movie reviews as positive or negative. Built a complete text preprocessing pipeline, including tokenization, vocabulary creation, and sequence padding, and implemented a trainable embedding layer for semantic representation learning. Achieved an accuracy of [Your Accuracy, e.g., 85%] on the test set, demonstrating proficiency in recurrent neural architectures and end-to-end model development.

- Implemented an LSTM-based architecture for binary sentiment classification of IMDb movie reviews.
- Designed a robust preprocessing pipeline with tokenization, vocabulary creation, and sequence padding.
- Developed a trainable embedding layer to learn and capture semantic relationships in text data.
- Trained, validated, and evaluated the model using PyTorch, achieving [Your Accuracy, e.g., 85%] accuracy on the test set.

## Education

Bachelor of Technology - 8.0/10.0 *CGPA*
Prakasam Engineering College, Dubagunta, Andhra Pradesh
**MAY 2024**

Intermediate (MPC) - 9.9/10.0 *CGPA*
Narayana Junior College, Kandukur, Andhra Pradesh
**MARCH 2020**

SSC - 10.0/10.0 *CGPA*
SIDDHARTHA HIGH SCHOOL, KANDUKUR, ANDHRA PRADESH
**APRIL 2018**