

# UTSAV CHAUDHARY

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Hello there! I'm a passionate **Fullstack Developer** with ~5 years of experience building end-to-end applications using a modern tech stack. On the **frontend**, I specialize in **React.js**, **Next.js**, and **TypeScript**, delivering sleek, responsive, and performant UIs. On the **backend**, I develop secure and scalable systems using both **Node.js (Express)** and **Python (FastAPI, Flask, Django)**, backed by relational and NoSQL databases.

My recent work emphasizes building fullstack applications where clean, intuitive frontend interfaces meet robust backend logic. I specialize in crafting dynamic and responsive UIs using **React.js**, **Next.js**, and **TypeScript**, often integrating real-time updates, authentication, and API consumption. On the backend, I structure scalable services using **Node.js (Express)** and **Python (FastAPI)**, managing data through **Firestore**, **PostgreSQL**, or **MongoDB**. Increasingly, I integrate **AI agents and LLM workflows** into these systems—delivering features like personalized automation, smart dashboards, and ML-backed recommendations—all deployed via **Docker**, **Kubernetes**, and platforms like **AWS** and **Azure**.

## Technologies

**Languages:** Python, JavaScript, Java, TypeScript, C++, C#, Rust, Bash, PowerShell, R, Go, Ruby, Swift

**Frameworks & Libraries:** React.js, Next.js, Redux, TailwindCSS, Chakra UI, D3.js, Chart.js, HTML5, CSS3, SCSS, Jinja

**Web Technologies:** Flask, NodeJS, Django, FastAPI, Express, ASP.NET, Angular, YAML

**Databases:** SQL, PostgreSQL, Azure SQL, Redis, AWS RDS, MongoDB, DynamoDB, Firebase, Firestore

**Cloud & DevOps:** Azure, AWS, CI/CD, Kubernetes, Docker, Jenkins, Terraform, Ansible, PowerShell, Yarn, NPM, RBAC

**Operating Systems:** Windows, Linux (CentOS, Ubuntu), macOS, Embedded Systems, RaspberryPi, Arduino

**APIs and Protocols:** REST APIs, OpenAPI, Swagger, WebRTC, SOAP, GraphQL, MQTT, WebSocket, OAuth, JSON-RPC

**Other Tools:** Kafka, Jira, GitHub, Nginx, Azure AKS, Metamask, Cron, WebSockets, OpenAI, Ollama, FFMPEG, Selenium

## Experience

**Fullstack Developer**, Midh Technologies, TX

Jan 2024 – Present

- Spearheaded the design and development of the official company website by translating **Figma designs** into a responsive, production-grade application using **Next.js**, **TailwindCSS**, and **React.js**, improving deployment velocity by **40%**.
- Engineered interactive frontend components with seamless **animations**, modular architecture, and efficient **state management** using **React Query**, **Axios**, and **custom hooks**; integrated APIs built in **Node.js/Express** using **Web Hooks**.
- Integrated third-party tools such as **Sumsu** (KYC/AML), **Hubspot** (CRM, ticketing, email automation), and **Stripe** (payment gateway) via SDKs and REST APIs, enhancing user onboarding and transactional efficiency.
- Architected a dual-database model using **Firebase Admin SDK** and **MongoDB Node SDK** for seamless connectivity between **Firestore** (real-time auth/state) and **MongoDB** (primary persistence), improving data sync reliability and scalability.
- Designed and implemented an **Admin Portal** as a separate frontend service using **React.js** and **D3.js**, integrating **Firebase Auth**, **RBAC**, and **Firebase Cloud Messaging** for secure, real-time dashboard analytics.
- Developed and deployed secure on-chain identity and asset management using **Fireblocks SDK** and **Metamask**, enabling wallet creation and blockchain interaction within the user profile system.
- Used **Docker** for **Node.js** containerization and orchestrated deployments via **Kubernetes** on **AWS EKS**; hosted frontend on **AWS Amplify** with CI/CD pipelines powered by **BitBucket**, ensuring scalable, automated delivery.
- Collaborated with testers and QA teams using **Jira**, managing issue tracking and resolution during release cycles, achieving a **94% bug resolution rate** within SLA.
- Integrated **HotJar** for user behavior analytics, implementing **heatmaps**, **session recordings**, and **user feedback polls** to optimize UX/UI design; managed **Google SEO** optimization including meta tags, structured data, and page speed improvements, resulting in **45% increase in organic traffic** and **28% improvement in user engagement metrics**.
- Authored clean, modular frontend/backend code and comprehensive internal documentation on UI logic, API schema, and data workflows—improving onboarding speed and reducing knowledge transfer time by **35%**.

**Python/Web Developer**, Compendious Medialabs Pvt. Ltd., IN

June 2021 - July-2022

- Developed a responsive **React frontend** that consumed live data from the FastAPI backend, creating interactive **charts**, **graphs**, and **metrics dashboards** using **D3.js** and **Chart.js**, improving data visualization efficiency by **45%**.
- Designed and developed an in-house **data scraping application** using **Python**, **Selenium**, **RestAPI**, and **Beautiful Soup**, automating **data extraction** from diverse web sources with dynamic content structures, reducing collection time by **60%**.
- Designed responsive **UI/UX components** using **Styled Components** and **Material-UI (MUI)**, creating mobile-first layouts with **Flexbox** and **CSS Grid** that adapted across **5+ device breakpoints** and improved user engagement by **28%**.
- Implemented real-time data synchronization between the React frontend and FastAPI backend, displaying live metrics with **WebSocket connections**, handling **10,000+ data points** with smooth rendering performance.

- Integrated robust error-handling mechanisms to identify and recover from failures during scraping sessions, improving scraping reliability and ensuring a **93% success rate**.
- Developed a **FastAPI backend** to serve the collected and scraped cleaned data through **JSON REST endpoints**, implementing **Pydantic models** for data validation and achieving **250ms average response time** for data queries.
- Implemented advanced **state management** in React using **Redux** and **Context API**, optimizing data flow and reducing component re-renders by **35%**, while ensuring seamless user experience across **12+ dashboard components**.
- Collaborated with cross-functional teams using **Jira** for bug tracking and agile sprint planning, enhancing team productivity and ensuring timely resolution of issues.

**Software Engineer**, Softline Solutions PVT. LTD

Feb 2020 - March 2021

- Collaborated with ML developers to build a comprehensive **Sign Language translation and augmentation system**, contributing to **data collection, labeling, and dataset preparation** for the machine learning pipeline.
- Developed a **Flask web application** using **Python, HTML5, CSS3, and JavaScript** to showcase the ML team's sign language models, providing an interactive interface for ML developers to test and demonstrate model performance.
- Implemented dynamic frontend templates using **Jinja2** and **Bootstrap** for responsive design, creating real-time model prediction displays and result visualizations that improved model testing workflow by **40%**.
- Integrated **JavaScript libraries** including **jQuery** and **Chart.js** to build interactive dashboards displaying model accuracy metrics, confidence scores, and prediction results, enhancing the ML team's ability to analyze model performance.
- Designed and deployed a **TensorFlow Lite model** integration within the web interface for **efficient, real-time inference**, optimized for edge devices and browser-based testing.
- Integrated the deployed model with **Unity**, enabling seamless **(ASL) American Sign Language translation** within **Augmented Reality (AR)** environments for real-time user interaction and frontend demonstration.
- Built frontend components for **image upload, webcam integration, and real-time prediction display** using vanilla **JavaScript** and **HTML5 Canvas**, allowing ML developers to easily test models with live data input.

**Web Developer**, underDogs Gaming Studios, IN

Sept 2018 - July 2019

- Developed custom **ecommerce websites** for clients using **HTML5, CSS3, JavaScript, and Bootstrap**, creating responsive and user-friendly online stores that improved client sales conversion rates by **25%**.
- Built interactive **landing pages** and **product showcase websites** using **jQuery, AOS (Animate On Scroll), and Swiper.js** libraries, enhancing user engagement and creating visually appealing client presentations.
- Created comprehensive **admin dashboards** for both company and customer management using **Bootstrap** and **Chart.js**, enabling real-time monitoring of sales metrics, inventory, and customer analytics.
- Integrated multiple **third-party APIs** including **payment gateways** (Stripe, PayPal), **shipping APIs**, and **inventory management systems** with backend services, streamlining ecommerce operations and reducing manual processing by **40%**.
- Implemented **database integration** for ecommerce functionality using **MySQL** and **PHP**, handling product catalogs, user accounts, order management, and transaction records with optimized query performance.
- Developed responsive **customer portals** using **JavaScript** and **AJAX** for real-time order tracking, account management, and customer support, improving customer satisfaction and reducing support tickets by **30%**.

## Projects

**LinkedIn Reverse Search Platform**

Client Project

- Built a comprehensive **data enrichment platform** using **Python, Selenium, Beautiful Soup**, and fine-tuned **Hugging Face models** to automatically extract LinkedIn profiles and verified contact emails, processing **1000+ records per batch**.
- Developed an intuitive **Next.js frontend** with **drag-and-drop Excel upload**, real-time processing indicators, and interactive data tables using **React Table** and **Material-UI** for seamless file management and progress tracking.
- Designed a comprehensive **admin dashboard** using **React.js, Chart.js, and D3.js** featuring analytics on processing success rates, API usage metrics, and user activity with responsive design for desktop and mobile.
- Architected a **multi-threaded data processing pipeline** integrating LinkedIn scraping, SalesQL APIs, and custom ML models, implementing **Redis caching** and **MongoDB** storage to reduce processing time by **45%** for recurring requests.
- Implemented secure **user authentication** and **subscription management** using **Firebase Auth** and **Firestore**, with automated **SMTP email delivery** system for processed Excel files and user account management.
- Deployed the platform using **Docker containers** with **automated CI/CD pipelines**, implementing rate limiting and monitoring to maintain **99.5% uptime** while processing thousands of enrichment requests daily.

**AI-Powered Video Generation Pipeline**

Personal Project    **Instagram:** [instagram/thatvocabguy/](https://www.instagram.com/thatvocabguy/)

- Developed an advanced **AI-powered video generation pipeline** using **Python** and **machine learning models**, integrating **F5-TTS (Flow Matching)** for high-quality voice cloning and speech synthesis, creating complete AI-generated content.

- Integrated **OpenAI API** for intelligent script generation and **F5-TTS** for creating cloned audio with fluent speech reproduction, using WhisperAI for transcription and FFMPEG for adding subtitles to the video.
- Built sophisticated video processing system using **FFMPEG** to merge audio with dynamic trending gaming backgrounds, extracting random segments from large video files and overlaying custom images and text for randomized generation.
- Designed end-to-end automated pipeline that processes scripts, generates voice audio, combines with dynamic backgrounds, and creates complete videos with customized text overlays and synchronized audio-visual elements.
- Developed multi-channel automation system supporting **YouTube** and **Instagram** uploads, maintaining platform-specific metadata, tags, and formatting while ensuring consistent branding and content optimization across channels.
- Created intuitive **Gradio interface** for pipeline management, allowing real-time monitoring of video generation progress, voice cloning status, and batch processing of multiple videos with customizable parameters.
- Orchestrated scalable deployment using **Docker containers** and **CRON jobs**, enabling automated content creation and distribution pipeline that generates and publishes **50+ videos daily** across multiple social media platforms.

## Education

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State University of New York at Binghamton  
Master of Science in Computer Science

Aug 2022 – Dec 2023  
3.44/4.00 GPA