

RUTWIK SARAF

+1 (689) 254-8724 ✉ rutwiksaraf@ufl.edu [in linkedin.com/in/rutwiksaraf3](https://www.linkedin.com/in/rutwiksaraf3) rutwiksaraf.com

Education

University of Florida

Master of Science in Computer Science

05/2025

GPA: 3.53/4.0

Pune Institute of Computer Technology, University of Pune

Bachelor of Engineering in Information Technology

05/2023

GPA: 9.22/10.0

Technical Skills

Languages:	Python, JavaScript, TypeScript, C++, Java, HTML, CSS, SQL
Web Technology:	React, Node.js, Express.js, Next.js, Flask, Django, Angular, TailwindCSS, TerminalFour
Databases:	Oracle SQL Developer, GraphQL, PostgreSQL, MS SQL Server, MongoDB, VectorDB
Machine Learning:	TensorFlow, OpenCV, Keras, PyTorch, Matplotlib, Seaborn
Developer Tools:	Git, Linux, AWS (EC2, S3, IAM, Lambda, ECS, SQS), Agile/Scrum, Microservices, Docker, Kubernetes

Experience

UNIVERSITY OF FLORIDA (Remote)

01/2025 – Present

Software Engineer

- Engineered a full-stack web portal using **React, Node.js, MS SQL** enabling 150+ farmers to register, submit field inputs, and access merged weather and forecast data via Weather APIs, improving farmer engagement by 40%.
- Accelerated website performance through frontend refactoring, added loading states, minimized render cycles, and enhanced file handling. Reduced page load and file download times by 25%, improving user task completion time.
- Constructed a data-processing pipeline fetching and analyzing soil moisture via **REST APIs and Python** scripts, automating real-time visualization of soil field capacity and saving over 15 hours/week of manual work.

AMERICAN EXPRESS (Remote)

01/2025 – 05/2025

Software Engineer Apprentice

- Built a role-based access control platform enabling admins to upload Excel datasets and visually map data using React and AG Grid, enforcing secure, granular data access for 100+ users across multiple teams.
- Implemented comprehensive version-tracking and real-time data editing features, integrating **React** frontend with **Node.js** backend and **MongoDB**, enabling audit trails of user modifications, reducing data reconciliation errors by 35%. Enabled cell-level change tracking with full audit trails, including user ID, timestamps, and before/after values.
- Deployed cloud infrastructure on **AWS (EC2, S3, IAM)**, maintaining 99.9% uptime, enabling cross-team collaboration.

VOLORIDGE INVESTMENT MANAGEMENT (Jupiter, Florida)

05/2024 - 08/2024

Software Engineer Intern

- Developed interactive mobile-friendly drag-and-drop trading widgets using **React and TypeScript** for a Workspace Manager platform, enabling traders to view and execute trades, increasing workflow efficiency by 30%.
- Integrated **GraphQL APIs** with Zod schema validations to ensure high data integrity and reliability, reducing runtime validation errors by 40%. Standardized UI design leveraging ShadCN UI components, resulting in consistent interfaces and reduced design inconsistencies across widgets.

JyoSH AI (Pune, India)

08/2022 - 06/2023

ML Engineer Intern

- Shipped a **YOLOv5-powered** real-time detection pipeline for image classification, showcasing transferable ML capabilities applicable to abuse/spam detection systems. Achieved a 0.85 mAP and reducing identification time by 40% and published findings in European Chemical Bulletin on agricultural computer vision applications.
- Created a multilingual code-mixed dataset of 1,000+ sentences from YouTube and WhatsApp for sentiment analysis, achieved 67.7% accuracy using SVM and Naive Bayes, with results published at the 2023 IEEE ESCI Conference. [↗](#)

Projects

US MOTOR VEHICLE ACCIDENTS ANALYSIS | *React, Flask, Oracle DB*

08/2023 - 01/2024

- Architected a three-tier web platform to analyze 7.7M+ US accident records, enabling users to visualize temporal trends, environmental factors, and infrastructure-linked accident correlations.
- Refactored multi-join SQL queries over 5 years of data, reducing execution time by 40% and enabling interactive visualizations of high-risk zones.

BYTE BOT (Finalist in UF AI Hackathon) | *React, Flask, VectorDB*

11/2023 - 12/2023

- Enhanced website UI/UX by integrating a conversational GenAI chatbot, streamlining user interactions by 60%.
- Designed a responsive chatbot interface that dynamically adapts to user queries for personalized UX.