

Saurav Dosi

Dallas, TX, United States | Willing to relocate

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SUMMARY

An Azure-certified AI Researcher with 3+ years of industry experience and 2+ years of academic research experience.

SKILLS

Areas: Computer Vision, NLP, Reinforcement Learning, Robot Navigation, Edge AI, Diffusion Models, LLMs and VLMs

Programming: Python (Over 20,000 lines), C/C++ (Over 10,000 lines), Java (Over 5,000 lines), SQL, R, Bash, JavaScript

Tools: TensorFlow, PyTorch, OpenCV, Keras, SpaCy, Llama 2, NumPy, Pandas, PySpark, MySQL, MongoDB, GCP, AWS, Docker

EDUCATION

The University of Texas at Dallas, Dallas, TX

Expected: May 2025

Master of Science, Computer Science (Intelligent Systems Track)

GPA: 3.97/4

Accomplishments: Pursuing Independent Research, Secured Jonsson School Dean's Graduate Scholarship

Indian Institute of Technology, Dharwad, India

June 2021

Bachelor of Technology, Machine Learning Minors

GPA: 3.64/4

Accomplishments: Defended Independent Thesis and Published Paper [1], Achieved Department Rank 2

PUBLICATIONS

[1] **Saurav Dosi**, Bala Vamsi, Samarth S Raut, and D Narsimha. Segregation of Areca Nuts Using Three Band Photometry and Deep Neural Network, chapter 2. Soft Computing and its Engineering Applications, Springer, May 2022.

EXPERIENCE

Researcher and Grader

The University of Texas at Dallas, Dallas, TX

October 2023 - Present

- Building a time-efficient **Robot Exploration** algorithm to achieve 95%+ 2D SLAM map coverage in unseen environments, utilizing Vision-Language Zero Shot Detection, Graph Neural Nets, Actor-Critic, and tools such as NVIDIA Isaac ROS and Stable Baselines3.
- Automating grading to save 50% of the time, and mentoring for CS3345: **Data Structures and Algorithms**, a class of 140 students.

Data Science Intern

ISN Software Corporation, Dallas, TX

June 2024 - August 2024

- Innovated LSTM-based **Intelligent Fuzzy Matching**, a multifaceted solution for company matching, grouping, and industry prediction that enhanced over 3 production projects. Achieved 98% keyword prioritization accuracy and improved matching precision from 80% to over 90%. Developed in TensorFlow, utilizing Attention layers and k-fold TFIDF and accelerated by Trie and NumPy.
- Engineered an end-to-end **Prospect Client Analysis** workflow that reduced prospecting time by 75%, and cut costs by 50%. Built in Alteryx with Python multiprocessing, utilizing NER for data cleaning from SQL client leads, coupled with Intelligent fuzzy matching.

Machine Learning Engineer

Quantrium AI, Chennai, India

July 2021 - July 2023

- Led a team of 3 engineers to revamp a **Smart Shelf Auditor** to achieve 95% accuracy, and cut costs by 10%, by transfer learning a RetinaNet, using GCP Linux servers. Improved the product sequence identifier accuracy by 15% by leveraging FRCNN and OpenCV.
- Researched ByteTrack - a Multiple Object Tracking Algorithm to build a POC on **Sports Analysis** for Soccer providing 5+ actionable game analytics utilizing PyTorch. This POC inspired the development of a new Video Analytics product for the company.
- Pioneered a **Document Sender Identifier** app with 98.3% accuracy and boosted the process speed by 80%. Leveraged Spacy 3.2 NER with Transformer BERT embeddings to employ the smart company-matching logic powered by Python multiprocessing.
- Spearheaded 2 ML teams to launch successful products. Initiated new recruiting standards after interviewing over 50 ML candidates.

Artificial Intelligence Engineer

Mirrag AI Ltd, Mumbai, India

April 2021 - June 2021

- Developed a 90% accurate real-time **License Plate Recognizer**, harnessing custom YOLOv5 and PaddleOCR on Google Colab.

Data Science Intern

Express Analytics, Pune, India

September 2020 - January 2021

- Engineered a 93% accurate **Sentiment API** with emoji support for customer review analysis using Flair, Flask and AWS Lambda.

PROJECTS

DOG: Dynamic Object Grasping, Robot Manipulation, Robotics Course at UTD

- Engineered grasping algorithm for objects moving on a 2D deterministic path with 80% success rate using RLS, and YOLO-World.

Virtual Try-on, Virtual Collaboration with Artisse AI

- Ensembled IDM-VTON and OOTDiffusion to achieve 85%+ CLIP and SSIM scores for in-the-wild images using PyTorch.