

KRISH SHAH

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EDUCATION

- University of Wisconsin-Madison, (Madison, WI, USA)** August 2024 - May 2026
Masters of Science in Data Science
- Sardar Patel Institute of Technology, (Mumbai, India)** August 2020 - June 2024
Bachelor of Technology in Computer Engineering CGPA 8.92/10

RESEARCH EXPERIENCE

- Great Lakes Institute of Management** Chennai, India
Research Intern in Deep Learning June 2023 to July 2023
- Worked on live video captioning and video summarization using deep learning models such as Transformers, MobileNet, LLMs, and FasterRCNN-Resnet50 and used NLP for generating summarized captions using TensorFlow framework and Python
 - Created an algorithm for extracting relevant frames from live video surveillance feed to ensure memory and time efficiency for faster processing and predictions using Savgol filter and Difference thresholds using Python, NumPy, and OpenCV
 - Researched tracking consumers in retail stores using video surveillance for insights on consumer products using OpenCV
- Indian Institute of Technology Patna** Patna, India
Research Intern in Deep Learning January 2023 to June 2023
- Surveyed detection and classification of brain tumors using models like VGG19, Transformers, Resnet-50, CNN, and MobileNet architectures with custom layers and weights using TensorFlow framework and Python and achieved an accuracy of 99.68
 - Collaborated with Indira Gandhi Institute of Medical Science's State Cancer Hospital located in Patna for research and fine-tuned our model by getting feedback from their doctors and using their dataset of patients with brain tumors to enhance the model
 - Employed image processing algorithms like object-centric image extraction, gamma correction, and CLAHE on brain MRIs

ACADEMIC PROJECTS AND PAPERS

- Crop And Weed Segmentation using Resnet-Unet Architecture (Submitted in International Conference)**
TensorFlow, TensorFlow Lite, PyTorch, Python, OpenCV, Data Analytics
- Examined and developed deep learning models for segmentation using TensorFlow, data analytic tools for data visualisation, and OpenCV and CLAHE algorithm for preprocessing techniques on crop data and videos
 - Trained data using Unet architecture with Resnet as encoder blocks and achieved accuracy of 99.68% accuracy
- Security Operation Centre Project**
Rsyslog/Syslog-NG, Prelude SIEM, Security Onion, Graylog, PacketFence, Python, Splunk, Security Onion
- Collected, aggregated, stored, and analyzed logs from various sources within the organization's IT infrastructure using log analyser
 - Implemented Event Correlation Analysis to improve threat detection, integrate with SIEM tools, and analyze multiple logs
 - Automated SOC operations using Ansible playbooks for rule updates and network device configurations across firewalls
 - Developed a machine learning model in Python for network intrusion detection using data collected from network infrastructure
- Logo Uniqueness using Content-Based Image Retrieval(CBIR)**
TensorFlow, Python, Flask, HTML, CSS, Javascript May 2022
- Created a model that verifies whether a logo or trademark design of a company already exists or not to avoid copyright infringement using CBIR that removes the need for manual tagging of individual images and instead focuses on features of images
 - Worked on VGG-19 model to generate features for logo images and rank them after comparing them with other company logos
 - Built a website using JavaScript, HTML, CSS, and Flask, along with an API that provides information about the existing logo
- Zomato Restaurant Data Analysis**
Python, R, Power BI, HTML
- Examined and collected 8 months of Zomato restaurant data with 10,000+ records to identify top dishes, highlight most sold items with 5-star ratings, analyse top 3 items per high-sales category, and reveal seasonal trends using Python, R, Power BI.
 - Designed Sankey diagrams to map customer journeys from menu views to orders and visualized low-rating orders to identify negative feedback causes making data-driven changes in the restaurant, resulting in a ratings improvement from 3.6 to 4.1.

TECHNICAL SKILLS

- Programming languages:** Proficient- Python, R, Familiar- Java
- Frameworks and Libraries::** Proficient: TensorFlow, NumPy, Matplotlib, Pandas, Scikit-Learn, Transformers, MySQL, Seaborn, Spark MLlib, AWS, Tableau, NoSQL; Familiar: Flask, PyTorch, QlikView, ETL pipelines
- CS Fundamentals:** Data Structures and Algorithms, Artificial Intelligence, Machine Learning, Big Data, Data Analysis, Security Operations Center, Cloud Computing, Blockchain, Deep Learning, Probability and Statistics, Data modeling, Data warehousing

CERTIFICATIONS

- Completed Machine Learning course by Stanford University on Coursera