SHREYAS SACHIN KULKARNI

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EDUCATION

1. **Masters of Science In Information Science:** *Information Management* - 2024 to 2026
   College: *University of Illinois at Urbana-Champaign;UIUC*

2. **Bachelor of Engineering:** Computer Engineering with **Honors** in Data Science - 2019 to 2023 | **GPA:** *9.44/10*
   College: *Marathwada Mitra Mandal's College of Engineering (MMCOE); Savitribai Phule Pune University*

COMPUTER SKILLS

- **Operating System**: Windows, Linux
- **Languages**: Python, HTML, CSS, C++(basic), SAS(beginner)
- **Database**: MySQL, MongoDB
- **Application Software**: Google Sheets, PowerBI, Tableau.
- **Cloud**: Azure

PROFESSIONAL/INTERNSHIP EXPERIENCE

Apptware *(India, Pune September 2022 to June 2024)*
Associate Data Scientist

- Quantum Mind 451 Project: Contributed to the development of the "ingestion" backend using Django and GPT-4, analyzing web content from over 500 links to generate summaries and actionable insights for more than 20 clients, utilizing Pandas and NLP libraries.
- IVR Project: Researched real-time IVR detection, comparing custom-trained speech-to-text models from Nvidia and OpenAI, enhancing output speed from 1s to 200ms, and investigated vector databases like Weaviate for NLP analysis of transcribed audio.
- Fruit Counting Project: Designed and trained a YOLOv8 nano object detection model on over 8000 images for real-time fruit counting in camera settings, specifically targeting apples, oranges, and mangoes.

Datasmith.AI *(India, Pune January 2022 to July 2022)*
Earth Data Science Intern

- Investigated data collection methods and learned 4 diverse pre-processing techniques for enhancing satellite imagery analysis, with a focus on NISAR data, to improve understanding and interpretation of remote sensing data for crop detection and yield prediction projects.
- Developed and trained a YOLOv5 object detection model for precise crop prediction, acquiring skills in image-based data processing and applying them to satellite imagery analysis for agricultural applications.

PROJECTS

➢ **FINAL YEAR PROJECT *(India, Pune January 2023 to June 2023)***

Title: *Prognosis of Cardiovascular diseases using chest radiographs*

- Implemented YOLO V5 for multi-class detection of 14 lung and heart diseases, training on 15,000+ images extracted from 200GB DICOM files, optimizing for high precision and recall metrics.
- Engineered a high-performance backend using FastAPI, integrated with React frontend, facilitating efficient data ingestion, real-time disease inference, and intelligent doctor recommendation algorithms.

➢ **MINOR PROJECTS**

Title: *Microservice based Video to MP3 convert* ***(India, Pune January 2023)***

- Developed a Flask-MongoDB application orchestrated via Kubernetes (k8s) on Minikube, implementing RabbitMQ for efficient message handling and asynchronous processing of user-uploaded videos, with email notification triggers.
- Constructed a 4 body microservices architecture leveraging Kubernetes for deployment and operational management, integrating RabbitMQ for inter-service communication, and implementing user authentication for secure file access.

Title: *Building an Exercise Classifier based on a Fitness Tracker* ***(India, Pune November,2022)***

- Designed a robust data pipeline for fitness tracker data, incorporating advanced pre-processing techniques (cleaning, merging, resampling), multiple outlier detection methods (IQR, Local Outlier Factor, Chauvenet's criterion), and sophisticated feature engineering (Butterworth's low-pass filter, PCA, Fourier Transformation).
- Implemented "Forward Selection" for feature optimization and trained multiple machine learning models (Random Forest, ANN, Naïve Bayes, Decision Tree, KNN) for exercise type classification, achieving 98% accuracy with Random Forest on unseen data.

TECHNICAL PAPER

Journal Name: Gradiva Journal
Paper Title: A review on prognosis of cardiovascular and Pulmonary diseases using chest radiographs.
Issue: ISSN NO: 0363-8057

Journal Name: International Scientific Research Journal
Paper Title: A Review on Automatic Person Attribute Information Extraction and Disambiguation from Unstructured text.
Issue: ISSN: 2456-3307 **UGC** Journal No: 64718 Impact Factor = 7.254