

SAMEER KULKARNI

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SUMMARY

Innovative and results-driven Machine Learning enthusiast with a solid foundation in artificial intelligence and computer science, seeking to leverage advanced skills in data analysis, algorithm development, and software engineering to contribute to impactful projects. Experienced in orchestrating and spearheading complex projects such as brain tumor and cervical cancer detection. Adept at cloud computing and data visualization. Aiming to collaborate within a dynamic team to innovate and optimize machine learning solutions for real-world problems as an AI Engineer.

SKILLS

Languages	Python, Scala, C++
Data engineering	Hadoop, Airflow, Big Data, Data Pipelines, Data Warehousing, Snowflake, S3, Kubernetes, NLP, PyTorch
API	RestAPI, FastAPI
Cloud	Azure, Pyspark
Databases	SQL - MySQL, NoSQL- MongoDB
Cache	Redis
Message brokers	Kafka
Container	Docker
Data Science	Machine Learning, Deep Learning,Natural Language Processing, Gen AI,Data Analytics, Artificial Intelligence

WORK EXPIRENCE

Software Engineer	Feb 2024 - Present
Versa Networks	<i>Bangalore, Karnataka</i>

Skills/ Tools used: REST API, COS, Spirent, Network Automation, SDN, Cloud-native Architectures

Contribution:

- Engaged actively in a rigorous software engineer training program, gaining hands-on experience in network automation, SDN, and cloud-native architectures and decision-Making.
- Contributed to the development of cutting-edge networking solutions through mentorship, workshops, and real-world project assignments.
- Developed and implemented REST APIs to enhance the functionality and interoperability of network solutions.
- Utilized COS (Class of Service) to optimize and prioritize network traffic for improved performance. Leveraged Spirent tools for network testing and performance analysis to ensure high-quality delivery of networking solutions.

ML Research Based Intern

Compsoft Technologies	<i>Bangalore, Karnataka</i>
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Skills/ Tools used: Python, Machine Learning, TensorFlow, Research Methodologies

Contribution:

- Directed a structured training and orientation program to facilitate a comprehensive understanding of Machine Learning with Python and performed Analytical thinking.
- Created an interactive resource library on advanced Machine Learning skills in Python, which is now utilized by 20+ team members, fostering a culture of continuous improvement and innovation within the research department..
- Innovated in developing machine learning models and algorithms to solve real-world problems. Collaborated with team members to enhance project outcomes and research efficacy.
- Contributed to the creation of detailed research documentation and reports to support finding & methodologies.

PROJECTS

Deep fake images and videos detection using deep learning techniques

Skills/ Tools used: Python, computer vision libraries - OpenCV, GUI development with Tkinter.

Contribution:

- Orchestrated the integration of OpenCV for image manipulation detection, denoising, and grayscale conversion, achieving an accuracy of 85% in identifying forgeries.
- Formulated advanced solutions involving the deployment of copy-move forgery detection mechanisms resulting in streamlined processes for identifying manipulated images across 10 distinct testing environments with successful outcomes.

Ensemble classifier for Cervical cancer early detection

Skills/ Tools used: Python, Flask web framework, scikit-learn, classification algorithms.

Contribution:

- Pioneered the development of a web application for cervical cancer prediction, leveraging Flask to Orchestrate a user-friendly interface and scikit-learn to Implement a range of machine learning models, achieving accuracies up to 95%.
- Formulated a robust data preprocessing pipeline, Innovating techniques to handle missing values and Implementing SMOTE for oversampling, Enhancing the dataset quality and Optimizing model performance.

Brain tumor detection

Skills/ Tools used: OpenCV , TensorFlow/Keras for loading a pre-trained deep learning model, Python.

Contribution:

- Orchestrated the seamless Utilization of a pre-trained deep learning model loaded via TensorFlow/Keras, enabling the Efficient prediction of brain tumors from preprocessed images with an accuracy of 92%.
- Formulated a robust pipeline in Python to Facilitate end-to-end tumor prediction, Empowering healthcare professionals to Streamline the diagnosis process and Deliver timely interventions for improved patient outcomes.

Skin Lesion Classification using CNN Densenet Architecture with Data Augmentation

Skills/ Tools used: Convolutional Neural Network (U-Net) to analyze and segment retinal blood vessel images, Python.

Contribution:

- Spearheaded the development of a U-Net model that achieved 84% accuracy in retinal blood vessel segmentation, despite limited dataset availability.
- Innovated a solution to overcome dataset constraints by leveraging the STARE dataset, demonstrating the ability to generate meaningful results with only 28 training images.

ACHIEVEMENTS

- Spearheaded the development of an innovative ensemble classifier for early cervical cancer detection, which was honored as the **"Best Project of the Year 2024"** at BLDEACET, Vijayapura's Open Day.
- Catalyzed interest in AI-driven medical diagnostics through the successful presentation and recognition of the **"Cervical Cancer Detection Project"**.

EDUCATION

BLDEA's V.P. Dr. P.G. Halakatti College of Engineering and Technology, Vijayapura karnataka

Bachelors of Engineering in CSE(Artificial Intelligence And Machine Learning)

2020-2024

CGPA : 7.5/10

Smt. Vidya P Hanchinmani Pre University Independent Science College, Dharwad Karnataka

PUC in Science

2018-2020

Percentage: 82/100