Akshat Surolia

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PROFESSIONAL SUMMARY

Experienced Machine Learning Engineer and AI Researcher with 3 years of expertise in developing and deploying cutting-edge AI solutions across a variety of domains including education, marketing, medical, manufacturing, mental health, IT and more. Skilled in leveraging different modalities including text, speech, and images to create innovative AI models.

SKILLS

Languages	Python	Shell script	Java	SQL	HTML5/CSS	JavaScript
Frameworks and Libraries	PyTorch	TensorFlow	OpenCV	Spacy	Transformers	GIT
	FastAPI	Flask	Docker	MongoDB	Firebase	NumPy
	Pandas	Matplotlib	Scikit-Learn	Kubernetes	ReactJS	Redis

EXPERIENCE

Machine Learning Engineer
Wysa | Bangalore, India
Jun 2022 – Current

- Elevated performance of pre-existing models through targeted enhancements.
- Pioneered a novel architecture for intent classification utilizing semantic similarity obtaining in 300% improvement in classification accuracy.
- Expertly trained and fine-tuned models to refine aptness performance.
- Utilized advanced techniques such as quantization, graph transformation, and node fusion to drive model optimization resulting in a 10x reduction in server cost.
- Contributed to the development of patents and internal research projects.
- Provided support for ongoing multilingual projects.
- Conducted extensive user behavior analysis to drive retention and engagement.

Associate Data Scientist
DSMATICS | Pune, India
Aug 2021 – Jun 2022

- Building DL models and pipelines for use cases across facets spanning e-commerce, consumer data, markets, education, medical, industrial manufacturing and more.
- Scrutinizing existing Machine Learning (ML) models to identify key areas of modifications and deliver optimal solutions.
- Developing and implementing Machine learning operations (MLOps) framework to streamline the process of model development, deployment, and optimization.
- Creating synthetic datasets as part of developing models and slashing data acquisition costs by 95%.
- Consulting Companies for AI integration to meet their needs and resolve problems by recommending data-driven solutions.
- Training corporate employees in the domain of data science to meet the current market needs.

Key Projects

- Diverse Facial Edit and latent space manipulation, creating millions of faces with highly customizable

facial features.

- Recommendation Engine for dating app using user embeddings and personality evaluation with automatic question generation and zero shot personality classification.
- Real-Time Voice Bot with dynamic call flow, call transcription, speech synthesis and sentimental analysis.

Computer Vision Engineer
Necesario Innovations | IIT Gandhinagar, India   **Jan 2021 - Jul 2021**

- Lead Programmer and Technical Head of the product 'Snapper'.
- Implemented real-time HDR on Jetson Nano and applied Contrast Enhancement.
- Developed and Optimized models for 3D model Reconstruction, 3D Photography, Super Resolution, and Image Enhancement by applying 8-Bit Quantization, and using EfficientNetV2 feature maps to increase the model efficiency by 40% and making the inference 5 times faster.

PUBLICATIONS

- A. Surolia, "**Ooze - Handwritten Text Generator**", *GLS KALPA*, vol. 1, no. 4, pp. 35—49, Dec. 2021.

- A. Surolia, "**Recommendation System based on Artist and Music Embeddings**", *GLS KALPA*, vol. 2, no. 3, pp. 8–15, Jul. 2022.

AWARDS AND ACHIEVEMENTS

- Keynote Speaker for the topic "Data Science in India" at GLS University.
- Mentor at Script Winter of Code (SWOC) 2021.
- Awarded Best Student of Batch by GLS University.
- Attained 1st position in Smart Gujarat Hackathon in Health and Family Welfare Department.
- Won Relay Programming (Java), in a National Level Tech-Fest event.
- Secured 1st position in Extempore, in a National Level Tech-Fest event.

EDUCATION

M.Sc. in Artificial Intelligence & Machine Learning   June 2021
Department of Computer Science, Gujarat University, Ahmedabad, India   **8.3 CGPA**

Bachelors in Computer Applications   May 2019
Faculty of Computer Applications and Information Technology, GLS University,   **9.07 CGPA**
Ahmedabad, India

Higher Secondary Certificate – 12th   May 2016
St. Joseph's Convent Sr. Sec. School, Ratlam, India   **9.4 CGPA**

CERTIFICATIONS

- Generative Adversarial Networks (GANs) Specialization   deeplearning.ai
- Data Engineering with Google Cloud Specialization   Google Cloud
- TensorFlow Developer Specialization   deeplearning.ai
- Deep Learning Specialization   deeplearning.ai
- Machine Learning   Stanford University