ATHARVA YEOLA

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EDUCATION

University of California San Diego (UCSD) — September 2023 – Present
Master of Science (M.S) – Machine Learning & Data Science — *San Diego, USA*

Pune Institute of Computer Technology (PICT) — July 2019 – June 2023
*Bachelor of Engineering (B.E.) – Electronics & Telecommunication – **GPA: 3.9/4.0*** — *Pune, India*

TECHNICAL SKILLS

Programming Languages – Python, R, C++, Matlab, Javascript

Tools & Frameworks – Docker, AWS, CI/CD, Tableau, Linux, Git

Databases – MySQL, ETL, MongoDB, NoSQL, PostgreSQL

Machine Learning – PyTorch, TensorFlow, MLflow, Keras, LLMs, CUDA, Scikit-Learn, OpenCV, SciPy

WORK EXPERIENCE

Summer Research Analyst — July 2024 – Present
Qualcomm Institute - UC San Diego Division of Calit2 — *San Diego, USA*
- Authored multiple analyses using data mining and forecasting to identify public health trends. Key findings include a 23% increase in gambling addiction searches post-Murphy v. NCAA and a predictive model for HIV-related search trends, with predictions accurate to within ±5.2%.
- Co-developed "Waldo", an NLP tool with 98.20% accuracy in detecting adverse events from over 360,000 Reddit posts, advancing automated pharmacovigilance.

Graduate Student Researcher — March 2024 – June 2024
University of California San Diego — *San Diego, USA*
- Developed and implemented a novel RNA image segmentation technique that achieved an Intersection over Union (IoU) greater than 70% across nearly 300 individual cells, facilitating more precise biological analyses and insights.
- Accelerated the segmentation algorithm by leveraging parallel GPU processing, decreasing the processing time by 300% and reduced CPU overhead by 19.5 hours for a dataset comprising 2.2 million molecules

Research Intern for Computer Vision *(paper accepted at CVMI 2024)* — December 2022 – August 2023
Indian Institute of Technology (IIT) Patna — *Remote*
- Created a new dataset by utilizing advanced augmentation techniques to generate high-quality synthetic data, thereby expanding the dataset size to 100,000 images (30% increase), improving robustness of the model.
- Tailored a Vision Transformer architecture to address edge-case scenarios in traffic sign detection, beating the state-of-the-art F1 score by 9%.

Machine Learning Intern — August 2022 – April 2023
RhythmFlows Solutions Pvt. Ltd — *Pune, India*
- Conducted A/B testing to compare the effectiveness of content-based filtering against collaborative filtering in a music recommendation engine, resulting in a 33% boost in relevant recommendations. Deployed the content-based model on AWS Sagemaker with continuous weight updation for improved performance.
- Reduced document processing time by 7 seconds per document by utilizing Pytesseract OCR for electronic receipt scanning, and revamped the data analysis pipeline, minimizing human effort by 30%.

Machine Learning Intern — January 2022 – June 2022
Atomic Loops — *Pune, India*
- Spearheaded a team of three in training a YOLOv5 food detection model achieving 98% precision and then smoothly integrated it with a CCTV surveillance network.
- Collaborated with the data platform team to construct preprocessing pipelines, facilitating a notable 20% acceleration in project delivery rate.

PROJECTS

End-to-End Text Summarizer | 📎 *Transformers, NLP, GitHub Actions* — July 2024 – July 2024
- Built a text summarizer for concise summaries, managing the entire workflow from configuration to deployment.
- Automated CI/CD with AWS and GitHub Actions, handling Docker, EC2, ECR, and runner setup.

Retail Vision Enhancement | 📎 *YOLOv8, SuperGlue, Docker* — February 2024 – February 2024
- Implemented YOLOv8 for object detection, achieving over 90% accuracy in labeling on-shelf retail products.
- Utilized SuperGlue for precise product identification, and created a Dockerfile to ensure cross-platform reproducibility.