Venkata Krishna Anirudh Nuti

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ABOUT

As a Machine Learning Engineer with 2 years of experience and a master's degree from Boston University, I am excited to apply my skills in the industry and learn from its experience.

EXPERIENCE

Machine Learning Engineer, *Intain Technologies* *June 2019 - Aug 2020*

- Developed and deployed state-of-the-art computer vision model (object detection with Mask-RCNN) solution using TensorFlow framework in Python that generated **$500k** in revenue for the company.
- Leveraged docker and REST APIs to automate the process of field extraction, reducing manual effort by over **80%**.
- Achieved a **7%** improvement in accuracy (**97%**) by training Mask-RCNN model trained on images of size **500** per class, compared to **90%** accuracy achieved using RegEx.
- Utilized GitHub for source control and collaborated with team members to effectively communicate complex ideas through written, verbal, and data visualization presentations.

Machine Learning Engineer Intern, *Intain Technologies* *Feb 2019 - June 2019*

- Collaborated with the software development team to implement best practices and ensure team-oriented approach to project development.
- Used Google OCR to accurately extract relevant fields from over **4** scanned documents and financial statements, achieving **90%** accuracy rate.

Teaching Assistant, *Boston University* *Jan 2022 - May 2022*

- Assisted students in the course CS 677 Data Science with Python, which covered topics about supervised and unsupervised learning algorithms, under the guidance of Prof. Eugene Pinsky.
- Evaluated assignments and final projects of **50** students and interacted with them twice a week to answer all their queries throughout the semester.

PROJECTS

Smile Detection using Deep Learning: *Computer Vision, Deep Learning* [GitHub]

- Developed an image classifier that accurately distinguishes between smiling and not smiling images using Python and TensorFlow framework.
- Evaluated performance of popular CNN architectures, including ResNet50, Xception, ResNet152V2, VGG16, InceptionResNetV2, and LeNet5, and achieved highest accuracy of 89% with Xception.
- Utilized OpenCV's Haar Cascade face detector to isolate the region of interest (ROI) of each face for precise classification.

Image Generation of Butterflies using Diffusion Models: *Deep Learning* [GitHub]

- Trained a diffusion model using Hugging Face's diffusers library to generate stunning butterfly images.
- Employed a noise scheduler to add noise to 1000 clean butterfly images, which were then used to train a UNet architecture for denoising.
- Implemented the backward denoising process using AdamW optimizer and MSE loss function to update model parameters.

Detection of COVID-19 in X-Ray images: *Computer Vision, Deep Learning* [GitHub]

- Implemented binary classification of chest X-Ray images using VGG-16 CNN architecture pre-trained on ImageNet.
- Trained a new fully-connected layer head to classify images as normal or COVID-affected, and appended it to the pre-trained network architecture achieving an accuracy of 93%.

Financial Service Application: *NoSQL (MongoDB)* [GitHub]

- Worked on data analysis for financial services using MongoDB database containing three documents.
- Created a docker container to run MongoDB data analysis in R and deployed it on AWS EC2 instance using Jenkins pipeline for continuous integration and deployment of Docker images from GIT.

SKILLS

Languages: Python (*NumPy, Pandas, Scikit-learn, SciPy*), R, SQL (*SQL Server, PostgreSQL, MySQL, MongoDB)*
Tools and Frameworks: Machine Learning, Deep Learning, TensorFlow, PyTorch, Computer Vision, Diffusion Models, Statistics, Data Science, Data Engineering, Tableau, Statistical Analysis, Docker, AWS, OCR

EDUCATION

Master of Science, Boston University *Jan 2023*
Applied Data Analytics, GPA: 3.56

Bachelor of Technology, GITAM University *April 2019*
Computer Science Engineering, GPA: 8.46

Relevant Coursework: Data Structures and Algorithms, Data Science with Python, Machine Learning, Advanced Database Management Systems

CERTIFICATES

- Amazon Web Services (AWS) Cloud Practitioner
- Google Data Analytics Professional Certificate from Coursera