Bhaven Naik

Machine Learning Engineer

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Profile

As a skilled Machine Learning Engineer with experience in Python, PyTorch, Tensorflow, Keras, Pandas, Numpy, Scikit-Learn, and Matplotlib, I am well-versed in the development and deployment of machine learning models. Additionally, my proficiency in Flask, ReactJS, NodeJS, and HTML5 enables me to build robust client interfaces. With a Master of Applied Computer Science from St. Francis Xavier University, I am eager to leverage my skills and knowledge to contribute to innovative projects in the field of machine learning.

Skills

Technology

Python, PyTorch, Tensorflow, Keras, Pandas, Numpy, Scikit-Learn, Matplotlib, Docker, FastAPI, Hadoop, Flask, ReactJS, NodeJS, ExpressJS, HTML5, Bootstrap5, CSS3, Docker, PostgreSQL, MySQL, MongoDB.

Tools

VS Code, Docker, Jira, GitHub, Linux, macOS, Windows, Power BI, AWS (EC2 and S3), MS Office, JetBrains (PyCharm, WebStorm), Slack, Zoom, Microsoft Teams, Discord, Anaconda, Jupyter.

Memberships & Certifications

- Digital Nova Scotia Member
- IBM Machine Learning Essentials

Professional Experience

Research Assistant Intern, *St. Francis Xavier University* 09/2021 – 04/2022
Antigonish, Canada

- Conducted research on applications of Generative Adversarial Networks (GANs) in Augmentation and Medical Imaging.
- Fine-tuned a PyTorch Lightning DCGAN on the HMDB51 (Human Action Recognition) dataset to generate augmented videos.
- Used PyTorchVideo's pre-trained classifier to measure the performance of the augmented clips w.r.t. original clips.

Internship Trainee, *EduVance* 06/2018 – 07/2018
Mumbai, India

- Worked on Python basics, File I/O, exception handling, lambda and map functions, list comprehension, and hands-on learning in Jupyter Notebooks.
- Worked on traditional Machine Learning algorithms like Decision Trees, Linear, Multivariate, and Polynomial Regression, Stochastic Gradient Descent, and Perceptron.

Projects

ML Model Deployment Demonstration, *Python, FastAPI, Docker, PyTorch* 01/2023 – 01/2023

- Implemented inference requests to the ML model using the Hugging Face Inference API.
- Developed Model API using one of the fastest Python web frameworks FastAPI.
- Designed a Docker Container Image for deployment purposes.

GAN Augmentation, *Python, PyTorch, PyTorch Lightning, PyTorchVideo* 09/2021 – 04/2022

- Researched the applications of Generative Adversarial Networks (GANs) in the field of Medical Science.
- Developed a fine-tuned PyTorch Lightning DCGAN on the HMDB51 (Human Action Recognition) dataset to generate augmented videos.
- Used PyTorchVideo's pre-trained classifier to compare the difference between augmented clips and original clips.

Exploratory Data Analysis, 01/2023 – 01/2023

Python, Jupyter, Pandas, Scikit-learn, Matplotlib, Seaborn

- Performed EDA on the Iris Flower dataset using Python libraries like pandas, scikit-learn, seaborn, matplotlib.
- Implemented the analysis in Jupyter notebook for better visualization.

Diabetic Retinopathy Identification, 03/2019 – 05/2020

Python, Tensorflow, Keras, Flask, HTML, CSS, AWS EC2

- Worked with TensorFlow Keras to fine-tune a pre-trained VGG16 model with custom classes as severities of Diabetic Retinopathy.
- Created an easily usable client interface using Flask for the backend, and HTML for the frontend, and designed it using CSS.
- Deployed the project using an AWS EC2 instance.

Education

Master of Applied Computer Science (graduated), *St. Francis Xavier University* 2020 – 2022
Machine Learning Design, Data Mining & Machine Learning, Big Data, Advanced Data Analytics Antigonish, Canada

Bachelor of Computer Engineering (graduated), *University of Mumbai* 2016 – 2020
Artifical Intelligence, Machine Learning, Data Warehousing & Mining Mumbai, India