SUMIT VAISE

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Summary

https://sumitvaise.dev
Master's in Electrical and Computer Engineering with overall 6+ years of experience using image processing techniques, computer vision algorithms, data science, and development boards to develop deep learning-based applications. 6+ years of experience in Python development. Part-time Python tutor.

Experience

Machine Learning Engineer
Quantiphi
Aug 2021 - Present (8 months +)
Major tasks involved Machine learning application development on GCP, creating solution architecture for different problem statements based on computer vision or data science, and weekly basis client interaction.
- Designed GCP-based solution architecture for object detection application for detecting small objects inside a restaurant's kitchen. Architecture implements a GCP pipeline starting from Cloud Storage for user input, Cloud Function for triggering multiple scripts, and BigQuery to store the results.
- Utilize Kubernetes microservices to run different services related to the project.
- Performed EDA in BigQuery and Python and created visualizations to obtain insights on datasets.

Senior Data Scientist
SalonEverywhere
Jan 2021 - Jul 2021 (7 months)
- Lead a team of 3 junior data scientists and communicate with different teams.
- Designed and implemented MLOps pipeline on AWS for text extraction, image classification, and image segmentation.
- Utilizing AWS Lambda, S3 buckets, Step Functions, and EC2 instances for running classifiers.

Research Assistant
Concordia University
Jul 2019 - Dec 2020 (1 year 6 months)
- Developed a French pronunciation application for Windows platform using Google Cloud Speech APIs Speech-To-Text and Text-To-Speech using Python and PyQt5.
- Utilized Model View Controller design patterns for developing the app.
- Used Docker to distribute the application across different team members.

Computer Vision Engineer
Bosch Global Software Technologies
Sep 2017 - Dec 2018 (1 year 4 months)
- Feature development and testing for semantic segmentation tool using OpenCV, C++, and PyQt5.

- Train different deep learning models like Siamese Network, VGG for different kinds of tasks like person re-identification and object detection using PyTorch.
- Perform Data visualization using seaborn and TSNEE.
- Developed an algorithm for converting densely labeled images to sparsely labeled images which reduced the training time by 22% without affecting the accuracy.
- Followed Agile methodology for project management.

Software Engineer

L&T Technology Services Limited

Jan 2014 - Aug 2017 (3 years 8 months)

Contributed to project planning, proposal document creation and lead a team of two for a project for 3 months. All projects followed the Agile methodology.

- Created a deep learning-based application using Python and TensorFlow on NVIDIA Jetson TK-1 for US clients. Models used AlexNet and Fast RCNN (FRCNN).
- Collaborated with the embedded team in developing an image processing application using OpenCV and C++ for image classification. The images were acquired using a Thermal Camera mounted on the developed board.
- Algorithm development for radiographic image stitching on MATLAB.
- Automated multiple applications to run from the boot time using Linux Bash scripting.
- Manually collected dataset by mounting RGB cameras on office premises.
- Created interface using Qt and MATLAB to create image segmentation dataset.

Education

Concordia University

Master's degree, Electrical and computer engineering

2019 - 2020

Subjects: Image Processing, Neural Networks, Software development and big data

Project: Diabetic Retinopathy Image Classification application development utilizing AWS, PyTorch, Django, HTML, CSS, MongoDB, and Python.

Skills

bash • c++ • Python (Programming Language) • SQL • Computer Vision • Amazon Web Services (AWS) • Google Cloud Platform (GCP) • Object Detection