Pavan Kumar Kandapagari

Deep Learning Engineer

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Experience

AGILE ROBOTS AG | Deep Learning Engineer

August 2021 – Current | Munich, Germany

- Developed a object detection and segmentation library as a node in robot vision pipeline.
- Researched and implemented a semi-supervised AI-based visual inspection framework to aid in industrial QA checks.
- Responsible for GitLab-runners used in CI/CD for all the team projects.
- User testing for in-house development/deployment tools.

BOSCH, CR/ACE | Deep Learning Master Thesis

Sept 2020 – March 2021 | Hildesheim, Germany

Master thesis on Object tracking under supervision of Prof. Dr.-Ing. Sebastian Stober, OVGU Magdeburg, and Herr Kapelner Tamas (CR/AEC4), Bosch

- Main objective of this thesis is to build and train a model that is able to track the detected object across the field of the environment given bounding boxes form objects detected beforehand.
- Aim of the thesis is to investigate the use of DL paradigm called Shared Memory Augmented Neural Networks (SHAMANN), that has the ability to use both temporal and global context information for multiple object tracking in crowded scenes

AUVISUS GMBH | Deep Learning Intern

March 2020 – Aug 2020 | Karlsruhe, Germany

Tasked with redesign of the classification system for vision checkout with deep learning using feature extraction and transfer learning, from scratch using python.

- Implemented with PyTorch and inference with ONNX for speed improvement.
- Trained a mobilenetv2 classifier using food data for transfer learning.
- Created, refined and documented 12 classifier and detector datasets for evaluation.
- Documentation was maintained using confluence.
- Project progress tracked and maintained using Jira.

Projects

OBJECT DETECTION AND SEGMENTATION LIBRARY | Python, PyTorch, MMCV

2021 - ongoing

- A config (.yaml or .py) based deep learning framework for internal use.
- This reduced the lead time across many deep learning vision based projects.
- This project is used for internal robot application development for 'pick and place' tasks

DL FOR SEGMENTATION OF INTRACRANIAL VESSEL WALL PATHOLOGIES | Python, Tensorflow, Unet, scikit-learn

2022 - ongoing

- As a part of this project, ground truths for all the images in training had to be made, an architecture of Deep learning (UNET) that suits best for the project in hand was to be chosen and the model had to be trained with limited images using data augmentation.
- An associated paper has be published at "Elsevier/ ScienceDirect" under "Interdisciplinary Neurosurgery" @ https://doi.org/10.1016/j.inat.2021.101307.

Skills

PROGRAMMING

Proficient:
Jupyter notebook • HTML
CSS

Experienced:
Python • LaTeX • Bash

Familiar:
Java • Dart • Rust

LIBRARIES/FRAMEWORKS

PyTorch • PyTorch Lightning
TensorFlow • Flutter

TOOLS/PLATFORMS

Git • VS Code • PyCharm
GitLab Pages • Docker

Education

OTTO-VON-GUERICKE UNIVERSITÄT, MAGDEBURG

Master's in Computer Science

Oct 2018 - April 2021 | Magdeburg, Germany

School of Computing

ECTS : 1.8

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY

Bachelor's in Mechanical Engineering

Aug 2011 - April 2015 | Ananthapur, India

Percent: 75

References

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