Aadhithya Sankar

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Experience

Master Thesis / Technical University of Munich, deepc GmbH
OCTOBER 2019 - NOVEMBER 2020, Munich, Germany.

Disentangled Representation Learning of Medical Brain Images using Flow-based Models. Worked on learning disentangled feature representations in the latent space for Brain MRI scans using Flow-based generative models. Grade: 1.0

Junior Data Scientist / deepc GmbH
JUNE 2019 - FEBRUARY 2021, Munich, Germany.

Working on Unsupervised Anomaly Detection in Brain CTs, supervised segmentation, detection and classification in Brain CT scans.

Project Work / WeDaVinci
NOVEMBER 2018 - JUNE 2019, Munich, Germany.

Developed a Hybrid Recommender System as part of the Inter-Departmental Project work.

Intern / National Informatics Centre
DECEMBER 2016 - MARCH 2017, Chennai, India

Involved in various Software Development Projects with Cordova, Java, Javascript, jQuery, etc, in State and Central Government related projects.

Education

M.Sc. Informatics / Technical University of Munich
OCTOBER 2017 - FEBRUARY 2021, Munich, Germany.

Courses: NLP, Deep Learning, Object Detection and Tracking, Machine Learning, Machine Learning for Computer Vision, Mining Massive Datasets.

GPA: 1.5 (Best GPA: 1.0, Fail: 5.0)

B.E. Computer Science and Engineering / Anna University
JUNE 2013 - APRIL 2017, Chennai, India.

Bachelor Thesis: Movie Rating Prediction Using Matrix Factorization.

GPA: 8.24 (Best GPA: 10.0, Pass: 5.0)

Skills

Python, PyTorch, Numpy, Scipy, scikit-learn, jQuery, JavaScript, React.

Research and Projects

GLOWin: A Flow-based Invertible Generative Framework for Learning Disentangled Feature Representations in Medical Images

2021.

We propose a Flow-based generative framework that is able to learn disentangled feature representations of brain MRI images. We evaluate the disentangled representations and showcase our model's ability to generate images with predetermined characteristics . (arXiv:2103.10868)

Train, Learn, Expand, Repeat.

2019.

A recursive training strategy to perform the task of semantic segmentation given only very few training samples with pixel-level annotations. The paper was accepted into the *ICLR 2020 workshop on AI for Affordable Healthcare.* (arXiv:2003.08469)

AdaIn-pytorch

2021.

PyTorch implementation of "Arbitrary Style Transfer in Real-time with Adaptive Instance Normalization" by Xun Huang, Serge Belongie.

SparseCaps-pytorch

2019.

PyTorch implementation of "Sparse Unsupervised Capsules Generalize Better" by David Rawlinson, Abdelrahman Ahmed and Gideon Kowadlo.

DeepCaps

2019.

PyTorch implementation of "DeepCaps: Going Deeper with Capsule Networks" by Rajasegaran et. al.

Languages

- **English:** Speak, Read, Write
- **Hindi:** Speak, Read, Write
- **Tamil:** Speak, Read
- **German:** Speak, Read, Write *(Goethe Zertifikat A2)*

References

Dr. Seong Tae Kim
Assistant Professor / Department of Computer Science and Engineering, Kyung Hee University.
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Dr. Mehmet Yigitsoy
Principal AI Engineer and Head of AI Engineering / deepc GmbH

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