ABHINAV SAGAR

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CONTACTS

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Google Scholar - https://scholar.google.com/citations?user=5ntkLcgAAAAJ
Medium - https://medium.com/@abhinav.sagar

EDUCATION

Vellore Institute of Technology, Vellore *July 2016 - June 2020*
Bachelor of Technology - Mechanical Engineering

EXPERIENCE

Stealth Startup, Mumbai, India Nov 2020 - Present
Co-Founder

· - Building next generation AutoML for medical imaging

Research Assistant, Vellore, India July 2019 - Mar 2020
Vellore Institute of Technology

· - Worked under the guidance of Professor RajKumar Soundrapandiyan and Professor Dheeba Jacob

Tessact, Mumbai, India May 2019 - Jun 2019
Machine Learning Intern

· - Designed a machine learning model from scratch for product recommendation using variational autoencoder.

· - The algorithm scored a mean average precision value of 0.86 which on deployment led to 23 percent increase in sales for the company.

Teaching Assistant, Vellore, India Dec 2018 - Apr 2019
Vellore Institute of Technology

· - Helped Professor Gayathri P in conducting lab experiments

Tata Group, Jamshedpur, India Jun 2018 - Jul 2018
Machine Learning Intern

· - Trained a neural network on power grid electricity consumption data to predict the load 24 hours ahead of the actual generation.

· - My work was later refined and deployed by current engineers. It is currently being used and has boosted upto 20 percent energy in the plant.

BACHELOR'S THESIS

Modelling of Vertical Axis Wind Turbine
https://abhinavsagar.github.io/files/thesis.pdf

RESEARCH PAPERS AND PRE-PRINTS

Abhinav Sagar
Bayesian Multi Scale Neural Network for Crowd Counting
https://arxiv.org/pdf/2007.14245

Abhinav Sagar, Rajkumar Soundrapandiyan
Semantic Segmentation With Multi Scale Spatial Attention For Self Driving Cars
https://arxiv.org/pdf/2007.12685

Abhinav Sagar
Generate High Resolution Images With Generative Variational Autoencoder
https://arxiv.org/pdf/2008.10399

Abhinav Sagar
Uncertainty Quantification using Bayesian Neural Networks for Biomedical Image Segmentation
https://arxiv.org/pdf/2008.07588.pdf

Abhinav Sagar
RUHSNet: 3D Object Detection Using Lidar Data in Real Time
https://arxiv.org/pdf/2006.01250.pdf

Abhinav Sagar
HRVGAN: High Resolution Video Generation using Spatio-Temporal GAN
https://arxiv.org/pdf/2008.09646

Abhinav Sagar
Monocular Depth Estimation Using Multi Scale Neural Network And Feature Fusion
https://arxiv.org/pdf/2009.09934

Abhinav Sagar
Generate Novel Molecules With Target Properties Using Conditional Generative Models
https://arxiv.org/pdf/2009.12368

Abhinav Sagar
Stochastic Bayesian Neural Networks
https://arxiv.org/pdf/2009.12368

Abhinav Sagar
Bayesian Neural Network via Stochastic Gradient Descent
https://arxiv.org/pdf/2006.08453

Abhinav Sagar, Dheeba Jacob
Convolutional Neural Networks for Classifying Melanoma Images
https://www.biorxiv.org/content/10.1101/2020.05.22.110973v3.full.pdf

Abhinav Sagar, Dheeba Jacob
On Using Transfer Learning For Plant Disease Detection
https://www.biorxiv.org/content/10.1101/2020.05.22.110957v2.full.pdf

Abhinav Sagar
Deep Covid - Covid Diagnosis Using Deep Neural Networks and Transfer Learning
https://www.medrxiv.org/content/10.1101/2021.05.20.21257387v1.full.pdf

PROJECTS

Cryptocurrency Price Prediction Using LSTM neural network
https://github.com/abhinavsagar/cryptocurrency-price-prediction

Breast Cancer Classification using CNN and transfer learning
`https://github.com/abhinavsagar/breast-cancer-classification`

Predicting the winner of 2019 cricket world cup using random forest algorithm
`https://github.com/abhinavsagar/ICC-2019-WC-prediction`

Customer Segmentation Using K Means Clustering
`https://github.com/abhinavsagar/kaggle-notebooks`

Multi Class Object Classification for Retail Products
`https://github.com/abhinavsagar/Grocery-Product-Classification`

TECHNICAL STRENGTHS

Programming Languages: Python, Java, C++

Libraries: Tensorflow, Pytorch, Scikit Learn, Keras, Numpy, Pandas, Spark

Framework: Flask, FastAPI

Cloud Computing: AWS, Azure, Docker, Kubernetes

Operating System: Linux, Windows

Database: MySQL, MongoDB

CAD Software: AutoCAD, Solid Edge

Simulation Software: Ansys, STAR-CCM+, SimScale

RELEVANT COURSES

Computer Science: Data Structures and Algorithms, Object Oriented Programming, Web Technologies, Java Programming, Python Programming

Mathematics: Statistics and Probability, Discrete Mathematics, Applied Numerical Methods, Multivariate Calculus, Partial Differential Equations

Aerospace Engineering: Fluid Mechanics, Gas Dynamics and Jet Propulsion, Heat Transfer, Computational Fluid Dynamics

Controls Engineering: Robotics, Mechatronics System Design

ACHIEVEMENTS

Participated actively in competitive programming on Spoj. My world rank currently is 3894

Active contributor of open source github repositories like Numpy, Mlpack, Open AI Gym, and p5.js

Wrote technical blogs for Towards Data Science and KDnuggets

Won first prize in CODE 2 CREATE hackathon held in VIT Vellore

Awarded VITEEE scholarship

Awarded Tata Group scholarship

EXTRA-CURRICULAR

Took sessions for juniors as part of Google Developers Group, VIT Vellore.