Dr. Shrishail S. Gajbhar

Assistant Professor | +91 7972046755

LinkedIn | GitHub | Kaggle | Blog

Summary

Researcher and an aspiring data scientist with strong analytical, programming, and problem-solving skills seeking to work on challenging problems in an organization that offers learning opportunities and professional growth in the field of data science and machine learning.

SKILLS

Machine Learning: Classification, Regression, Clustering, Decision Trees, K-Means Clustering, Bagging, Boosting, Stacking

Statistical Methods: Predictive Analysis, Hypothesis Testing and Confidence Intervals, Principal Component Analysis and Dimensionality Reduction

Programming Languages: Python, Core Java, Modern C++, MATLAB

Scripting Language: Bash | **Version Control & DevOps:** Git, GitHub, Docker

Big Data: Hadoop, Spark, Hive | **IoT:** AWS IoT

Cloud Competency: Google Cloud, AWS

Databases: PostgreSQL, MySQL | **Database Languages:** SQL, HiveQL

Libraries: NumPy, Pandas, OpenCV, scikit-learn, matplotlib

Frameworks: Keras, TensorFlow, PyTorch, Flask, OpenVINO, Django

EXPERIENCE

Walchand Institute of Technology, Solapur – *Assistant Professor*

July 2017 - PRESENT

- Working as assistant professor in department of Information Technology.
- Relevant Subjects Tought: Data Science, Machine Learning, IoT
- Projects Guided: Real time computer vision based yoga instructor, Unsupervised test tool for conducting online exams, Scene text detection and recognition, safety helmet detection in hazardous conditions

Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar – *PHD Scholar*

July 2011 - June 2017

- Developed new 2-D transforms for image-related applications using wavelets and filter banks theory. Efficacy of the developed transforms was tested for image denoising and image fusion applications.
- Research publications: 07 (Journals: 01, Book Chapters: 02, Conferences: 04
- Got best paper award at conference organized by IIT, Jodhpur in 2013.

ACADEMIC PROJECTS (Top 4)

- **Predict Future Sales**

  Handled a challenging time-series dataset consisting of daily sales data of one of the largest Russian software firms where goal was to predict total sales for every product and store in the next month.

  Skills: Time series data analysis, regression analysis

- **Predicting the Strength of high performance concrete**

  This project involved feature exploration and selection to predict the strength of high-performance concrete. Compared various Regression models to predict the strength. Scikit-learn pipeline, cross-validation techniques and grid search were used to tune the parameters for best model performance.

  Skills: Regression, feature engineering, ensemble methods, scikit-learn pipeline

- **Classifying silhouettes of vehicles**

  Classified vehicles into different types based on silhouettes which may be viewed from many angles. Used PCA in order to reduce dimensionality and SVM for classification.

  Skills: Classification, Principal Component Analysis, Support Vector Machines

- **Personal Verification System Based On Iris Texture Analysis**

  Implemented the iris recognition system proposed by its inventor John Daugman comprising of four stages namely Segmentation, Normalization, Feature Encoding and Matching. The system was tested on three iris databases with all possible intra-class and inter-class comparisons.

  Skills: Image processing, Biometrics

RESEARCH PAPERS (Top 5)

- **Design of complex adaptive multiresolution directional filter bank and application to pansharpening** (Journal)
  Signal, Image and Video Processing (SIViP), vol. 11, no. 2, 2017, Springer London.

  Proposed new 2-D directional transform and applied for multispectral image fusion.

- **Image Denoising using Tight-Frame Dual-Tree Complex Wavelet Transform**

  In: Tanveer M., Pachori R. (eds) Machine Intelligence and Signal Analysis. Advances in Intelligent Systems and Computing, vol 748., pp. 645-656, 2019, Springer, Singapore.

  Obtained new filter coefficients using optimization and applied for image denoising.

- **Design of Extrafine Complex Directional Wavelet Transform and Application to Image Denoising**

  16th International Workshop on Multimedia Signal Processing (MMSP-2014), Jakarta, Indonesia, pp. 1-6, 22-24 Sept, 2014.

  Proposed new 2-D complex wavelet transform and applied for image denoising.

- **Image Denoising Using Redundant Finer Directional Wavelet Transform**

  National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG 2013), IIT Jodhpur, India, December, 2013. (**Best Paper Award**)

  Proposed new 2-D wavelet transform and applied for image denoising.

- **Acoustical analysis of musical pillar of great stage of Vitthala temple at Hampi, India**

  International Conference on Signal Processing and Communications (SPCOM), IISC, Bangalore, India, 2012.

  Presented spectral analysis of the sound recorded from a musical pillar at Vitthala temple, Hampi, India - a world heritage site.

CERTIFICATIONS/COURSES

- TensorFlow in practice - by deeplearning.ai – Coursera (specialization course)
- How to Win a Data Science Competition: Learn from Top Kagglers - by National Research University Higher School of Economics – Coursera
- Data Science Math Skills - by Duke University – Coursera
- Getting Started with AWS Machine Learning – Coursera
- Introduction to Intel® Distribution of OpenVINOTMtoolkit for Computer Vision Applications - Intel – Coursera
- Python for Data Science - by NPTEL (**Among top 1%**)
- Programming in Java - by NPTEL (**among top 1%**)
- Kaggle Courses: Python, Intermediate Machine Learning, Pandas, Data Visualization, Intro to Machine Learning
- HackerRank certificates: Java Basic, Python Basic

EDUCATION

Great Lakes Executive Learning, Bangalore *- Post Graduate Program in Machine Learning (PGP-ML) completed in July 2020 with 98.78% (731/740 marks)*

Dhirubhai Ambani Institute of Information and Communication Technolgy (DA-IICT), Gandhinagar – *Doctor of Philosophy (Ph.D) (2017).*

Shri Guru Gobind Singhji Institute of Engineering and Technology, ***Nanded*** *– Master of Technology (M.Tech.) in Instrumentation Engg. (2011).*

Shri Guru Gobind Singhji Institute of Engineering and Technology, ***Nanded*** *– Bachelor of Technology (B.Tech.) in Electronics & Telecomm. (2008).*