



Somil Jain  
M.Tech 2<sup>nd</sup> year  
IISc, Bengaluru  
18/11/1995

Sr. No. 06-02-01-10-51-18-1-16071  
Dept. : Computational and Data Sciences  
Gender : Male

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Degree / Certificate	University / Board	Institute / School	Year of Passing	CGPA / Percentage
Post-Graduation	IISc	IISc	2020	8.2
Graduation	RGPV	SGSITS, Indore	2018	7.13
12 <sup>th</sup>	MP	SLSHSS, Sagar	2014	81.00
10 <sup>th</sup>	CBSE	DMA, Sagar	2012	8.20

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#### Scholastic Achievements

- Secured AIR 105 in GATE 2018. 2018
- Secured AIR 19 in Indian Engineering Olympiad. 2017
- Scored 217 marks in JEE Mains and qualified JEE Advanced. 2014

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#### Academic Projects

**Word2Vec** Jan-April '19  
CDS, IISc  
Bengaluru  
Dr. Shayan G. Srinivasa

- Aim of this project is to generate the vector representation of words (i.e. word embeddings).
- This is done by using Skip-Gram model which is proposed in mikolov et al. 2013.
- The results are evaluated using Simlex-999.

**LAT-LONG Mapping** Jan-April '19  
CDS, IISc  
Bengaluru  
Prof. Phaneendra Kumar Yalavarthy

- The aim of this project is to visualize the distribution of airport across the globe.
- Tableau software is used for this project and dataset is taken from airport authority.

**Food Delivery System using B2B2C Model** May-April'18  
CSE,SGSITS  
Indore  
Prof. K.P. Singh

- Food Delivery System using B2B2C (Business to Business to Consumer) Model aims to provide a hassle free platform for selling different kind of food item provided by different food hubs.
- Implemented to increase the market reach of small food-hubs .
- Android application for user and shop owner uses java for backend development.

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#### Platforms Worked

- **Operating Systems** : Windows, Linux
- **Programming Skills** : C, C++, Python, SQL, Matlab
- **Software Skills** : MS Office, Tableau, Anaconda, Pyspark
- **Machine Learning Library** : Tensorflow, scikit learn

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## Internship

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### Motion Correction in PET/CT Images

May-Aug 2019



Mr. Virendra Rode

- Our primary focus is to deal with the movement of patient head and hand that takes place while PET imaging.
- In some images we are getting streak like artifact in brain PET imaging, our theory is that it is due to the motion of hand such that while reconstructing we are getting artifact.
- I have used Demon's algorithm and b-spline registration for solving the problem of motion correction taking CT image as a template for PET image.

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### Ongoing Project

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- Evaluation of Non-Rigid Registration for Motion Correction in PET/CT Imaging.
- Search Intent Classification using bidirectional Encoder.

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### Courses Undertaken

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- Probability Models
- Neural Network and Learning System
- Data analysis and Visualization
- Cognitive Neural Science\*
- Deep Learning for NLP\*
- Medical Imaging
- Foundation of Data Sciences\*
- Design and Analysis of Algorithms.

\* - Ongoing courses in Current Semester (to be completed by Nov '19)

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### Academic Assignments

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- Perform k-means clustering and then implemented k-means RLS and k-means LMS algorithm for classification using RBF for hidden layer and making a decision boundary for 2 moon problem.
- Design Multi-layer perceptron (MLP) for a classification of two class square grid array and implemented the back propagation algorithm.
- Implementation of the binary logic functions AND, OR, and COMPLEMENT by a perceptron and SVM from scratch.
- Parallelized K-means algorithm with openMP, Merge sort with MPI and reduction by CUDA.
- Data Analysis on MovieLens data for movies using Apache Spark over the RDD API.

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### Positions of Responsibility

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Secretary of Club UPKAAR (A blood donation club of SGSITS). We under this club organize various events on Medicare and General Health CAMP throughout the year with a huge participation from the students. Our main focus is to donate the blood to the needy. 2014-18

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### Extracurricular Activities

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#### Cricket

- Member of Under-16 cricket team at state level. 2010

#### Aayaam & Upkaar

- Organised Medicare and Free Health checkup in Aayaam which included the main event Sanjeevani (Eye ,Dental , Skin , Hair ) and subsidiary event Food Marathon. March'17
- Secured 1<sup>st</sup> position in coding competetion (Tri-Tech-tonic) organised by the Computer Engineering Department. March'17