Mahesh Tom

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EDUCATION

Indian Institute Of Science   **August 2021 – Present**
MTech (Research) Computational and Data Sciences- **CGPA - 9.2**   *Bengaluru, India*

B.M.S College of Engineering   **August 2014 – May 2018**
B.E. Mechanical Engineering- **CGPA - 9.4**   *Bengaluru, India*

St. Vincent Pallotti School   **2012 – 2014**
ISC(Indian School Certificate)- **Percentage - 92.8**   *Bengaluru, India*

St. Vincent Pallotti School   **2001 – 2012**
ICSE- **Percentage - 93.7**   *Bengaluru, India*

WORK EXPERIENCE

Dassault Systemes   **June 2018 – July 2021**
R & D Software Development Engineer   *Bengaluru, India*

- Carried out development, maintenance and testing of code related to CATIA V5, DELMIA V6 and 3DExperience.
- Developed Highlights and support to many customers like Michelin, Dassault Aviation,Mercedes Benz, ISCAR .Highlights related to Tool path inversion,Development of User Friendly User Interface for machining operations,Feature recognition related highlight

EXTRA CURRICULAR ACHIEVEMENTS

- Won first place in Chess competition held in Dassault Systemes Bengaluru office in 2019
- Won Gold medal in 100m dash held during college sports day March, 2015
- Represented state of Karnataka for 100m dash at the ASISC national level athletic meet held in Thrissur,Kerala in November, 2013
- Won Silved medal in the athletic meet organised by KISA in 2013 for 100m dash

CO CURRICULAR ACHIEVEMENTS

- Secured AIR 134 in GATE Mechanical Engineering 2021 with a score of 868 and percentile of 99.89
- Secured AIR 32 in GATE Engineering Science (XE) 2021 with a score of 844 and percentile of 99.85
- Received Evangelist Award in Dassault Systemes for outstanding performance and contribution as a new comer
- Received Gold medal for highest CGPA for Mechanical Engineering for the graduating class of 2018
- Received scholarship of Rupees 10,000 for highest CGPA in 2016-17 and 2017-18
- Won Exceptional student award at St Vincent Pallotti School for the graduating class of 2014

PROJECTS

Using Hidden Markov Model for Keystroke Biometric Studies May 2022

- The aim of this project was to detect an impostor user using the way the user types the password (considering 50 users from the CMU Keystroke Dynamics data-set).
- Partially Observable Hidden Markov Model (POHMM) was used to classify the users based on data such as time duration for each key,time between consecutive keys.
- The training process was parallelized. A feed-forward neural network was used to improve the results of the HMM/POHMM model.

Extraction of a Table from an Image using ML models December 2021

- The aim of this project was to convert a handwritten table into an excel sheet csv format.
- It involved the extraction of content inside the table and then using ML models trained on the MNIST dataset to classify the characters.
- Various models like KNN,Random forest classifier, Logistic regression,Voting Classifier, Deep Neural Networks were used to classify the characters and results for each model were compared.

Design And Analysis of PIV System May 2018

- This project involved the design and analysis of a Particle Image Velocimetry System using a water channel and then conducting and validating some standard result(Flow over cylinder for low Reynolds' number).
- It involved the knowledge of experimental fluid mechanics for setup, and MATLAB and image processing for analysing the pictures and computing the velocity vectors from the pictures taken from a mobile camera.

CFD simulation of FSP with a cylinder March 2017

- This project involved simulation of a flow over cylinder augmented with a forward splitter plate (FSP) with different lengths.
- It was done using the open source package that uses C++ called OpenFOAM for computational flow simulations .
- The phenomenon of wakes was observed over different lengths of the splitter plate.

SKILLS

- C++
- Python
- MATLAB
- Scikit-learn
- Tensorflow
- Numerical Methods
- Basics of MPI,OpenMP
- FORTRAN
- CATIA V5
- 3DExperience
- OpenFOAM