Prashanth M R

Personal Info :

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Languages

Proficient in English and Kannada,

Hobbies

Photoshop Image editing ,Bird watching ,trekking , cycling ,playing chess etc.

ABOUT:

- A collaborative engineer who thrives on learning and passionate about mathematical challenges. Having an interest in Artificial intelligence ,Data analytics , neural networks, software modelling and programming. I am trying to improve myself and enhance my abilities by understanding the engineering challenges and trying to find innovative solutions for complex problems with the help of AI
- 4 year of experience in mathematical modelling of the vehicle power train system for data analytics using MATLAB & Simulink.
- 3.5 years of experience in practical implementation of deep learning and machine learning concepts.
- Worked on international assignment, 6 months in Germany
- Enjoys physics, mathematics, logic & programming

Skills

Programming Languages Known	• Python,C++,C,Excel VBA ,SQL and m-script.
ML Algorithms Experiance	• 3.5 years of Hands on experience in Deep learning and worked with various optimizing algorithms such as ADAM ,RMS Prop,Nestrov Gradient descent,Vanilla gradient descent, Stochastic gradient momentum based gradient descent • Have 3 years of experience in use of deep learning algorithms in NLP ,Stemming, word vectorization etc • Have experience working with various other ML concepts like Reinforcement learning,LSTM, CNN,Decision tree, Random forest etc
Python Packages	• ML : Tensorflow,keras ,Pytorch,nltk ,word2Vec and scikit-learn • Data Processing : pandas,numpy etc • Data visualisation : matplotlib, seaborn etc • Have built a custom deep learning library using only the numpy libraries without using the any of the ready made packages for implementation in vehicle software.
Tools and IDE	• Experience in working with tools like Pycharm, Anaconda Navigator , Spyder, Jupyter Notebook, Colab, Matlab, Simulink, Adavanced Excel and Labview
Soft Skills	• Demonstrating Agility, leadership, and responsibility by leading the AI project for the past 6 months • Demonstrated communication skills, Innovative thinking and creative by conducting cross-team innovation workshops • Good research and self-learning skills

Work History (4 years, Mercedes Benz Research and Development Ltd, Bangalore)

January 2021
~ present

AI based supplier quotation evaluation and supplier selection

This is an innovative effort from the company to automate the process of supplier quotation evaluation which currently cannot be done without the presence of human intuition and it also deals with the algorithm to select the best supplier

- The data lake consists of the following file formats like pdf ,excel ,word and ppt from which data is extracted
- The data then is translated to a structured database using NLP based techniques.
- Deep learning algorithm is applied on the structured data to come up with a deep learning model which will be able to estimate the supplier quotation based on its learning.
- Future plan is to use this data to select the supplier using reinforcement learning algorithm

Tools used: Pycharm, Excel VBA ,chamelot and tabula for pdf, openpyexcel for excel,keras,nltk,numpy ,pandas etc

July 2017 ~present	**Model in loop testing of vehicle software using real world vehicle data** *In this project the OBD software in the vehicle is developed,tested and implemented using real world sensor data available in the vehicle.* • It involves the Model in loop testing of the application software in Simulink via simulation. **Tools used:** Matlab , Simulink and m-scripting.
December 2019 ~ August 2020	**Modelling of a physical temperature sensor using deep learning** *Here a temperature sensor in an engine is modelled using deep learning techniques ,And is now in implementation stage in the vehicle* • Understanding of the issue by going through the vast vehicle real time data • Translating the vehicle data to numerical vectors for deep learning computations • Building of a deep learning model from basic mathematical functions like numpy from scratch so to make the model compatible with different platforms **Tools used:** Pycharm, numpy ,Simulink and Matlab
July 2019 ~ December 2019	**Automated dataset comparison using deep learning techniques** *It is a NLP based tool used to automate the process of documentation* • The Documentation of the Engine software for legal approval is long and time consuming process and is done mostly manually as it requires human intuition to understand the logic and describe it • A part of this activity involves comparing the difference between two documents but the simple comparison yields highlights lot of insignificant changes and it is time consuming to go through all of them ,hence a deep learning approach is used which will recognise only the significant changes • Here the words in the documents were converted to numerical vectors and was trained using a deep learning model. • This tool automates that particular effort by 95%. **Tools used:** Pycharm ,excel vba scikit learn, nltk, openpyexcel, numpy ,pandas etc
July 2019 ~ December 2019	**Dataset calibration tool in python** *A GUI based tool for deriving functional saftety calibrations for the engine from the main calibrations was developed* • The functional safety calibrations were derived by applying transformations to the 3 dimensional matrices . • With the help of this tool the process of functional safety calibrations was automated by 90%. • The tool is now being used by many engineers of Mercedes Benz in Germany ,India and North America **Tools used:** Pycharm ,tkinter,pyinstaller , openpyexcel, numpy ,pandas etc

Mini Projects

February - 2020	**AI for tic tac toe game** *To explore the practical implementation strategies for reinforcemt learning an AI based player was created.* **Software used:** Pycharm,keras,numpy etc.
October – 2018	**Implementation of different types of gradient descent optimization methods using Numpy** *Implemented and plotted different types of gradient descent algorithms like* • *Stochastic gradient descent* • *Momentum based gradient descent* • *Adam gradient descent* • *Adaptive gradient descent*

Education

2013 – 2017	**Sri Jayachamarajendra College of Engineering, Mysuru** *Bachelor of Engineering, Electronics and telecommunication Engineering* *CGPA: 9.13*
2011 – 2013	**Sadvidya Pre-University College,Mysuru** *PUC, Physics, Chemistry, Mathematics and Biology* *Percentage: 88.16%*
2010-2011	**Seventh Day Adventist English High School** *SSLC* *Percentage: 92.48%*

Courses

Certified	• Machine Learning Platform Technology and Tools (IEEE) • Machine Learning Algorithm , Models And System Integration (IEEE) • Machine Learning :Sound Buisness Practices for Data mining and Predictive Diagnosis
Uncertified	• Overview of AI and ML algorithms(Mercedes Benz Internal training for 2 weeks) • Tensorflow for Beginners (OREILLY) • Deep Learning with TensorFlow, Keras, and PyTorch by Jon Krohn (OREILLY) • Deep learning – Part1 from IIT Ropar (NPTEL)