



Yasa Viswambhar Reddy *ETL/HPC/ML/AWS*

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☎ 015256951451 🇮🇳 Indian 📅 1995.11.10 in Viswambhar Yasa 🔄 YasaV10

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SKILLS

GIT (Actions)

Python

C++

Matlab

TensorFlow

OpenCV

Apache (HIVE)

SQL

Tableau

HTML (CSS)

AWS

HPC

LaTeX

PROFESSIONAL EXPERIENCE

Assistant Systems engineer, TATA Consultancy Services (TCS) ✎

2017.11 – 2019.08 | Hyderabad, India

1. New York Life Insurance (NYL)

- Revamped existing model/ website using Big Data by storing terabytes of log information in the Hadoop file system to improve scalability and cost-effectiveness.
- Used **Spark pipeline** for data standardization and data aggregation.
- Build the ML models for classifying the products and **recommend suggestions**.
- Developed a **customer churn analysis** system to identify potential clients. The project was delivered in an agile model.

Tech stack: Python, Scikit, predictive modeling, Spark, Hive, HDFS, Tableau.

2. TATA Motors:

- Use of analytics for automation and enhancement in the field of **predictive maintenance** using machine learning.
- Identification of default engine from ECU and ECM log data.
- Performing data standardization and data aggregation using scikit learn for over 250 features.

Tech stack: Python, TensorFlow, Scikit, Azure.

ACADEMIC EXPERIENCE

Student Assistant, TU Bergakademie (TUBF),

2022.04 – present | Freiberg, Germany

Institute for Automation and Robotics

Robot-assisted inland water monitoring (RoBiMo ✎)

- Implemented machine learning algorithms (**See-thru and monolithic**) to generate an underwater image with depth estimation and water removal from images.
- Used **GANs** to improve the quality of the image based on the parameter extracted from the image using Meta shape.
- Development of **ML workflow** to process large photogrammetry projects on the HPC

Tech stack: Python, TensorFlow, Meta shape, Numba.

Supervisor: M.Sc. Sebastian Pose

Student Assistant, TU Bergakademie (TUBF), *Institute for Geotechnics*

2022.04 – 2022.09 | Freiberg, Germany

Age estimation of lunar rocks using ML method (Ar-Ar lab ✎)

- Extraction of data from **Mario Db using SQL** and processing the data for clean-up in python.
- Implemented different **regression models** to identify outlier in data and stored them in Mario Db.
- Used **ANN** to estimate the age of the material using the data generated from mass spectrometry.
- Software development using flask to create a web client API and build web pages using HTML and CSS to access data for visualization and analysis.

Tech stack: Python, SQL, Flask, Jinja, HTML, CSS, TensorFlow.

Supervisor: Prof. Dr. habil.Jörg Pfänder

Student Work, TU Bergakademie (TUBF),

2021.11 – 2022.04 | Freiberg, Germany

Institute of Gas and Heat Technology

- Built **ML software** to perform object segmentation and thickness evaluation on an infrared sensor with GUI.
- Extraction and processing of **infrared sensor data** in python (converted raw binary file to NumPy array of heatmaps).
- **Object segmentation (U-Net, FCN8, PSP)** to identify substrate, coating, and damaged features from thermal sensor.
- From the thermal time series data (thermal profile), the segmented object thicknesses are identified using **recurrent neural networks**.

Libraries: NumPy, Pandas, Hadoop, TensorFlow, OpenCV, Scikit-learn, Tkinter.

Supervisor: Dr. Andreas Pestel

INTERNSHIP

Intern, TATA Consultancy Services (TCS) 


2017.01 – 2017.03 | Hyderabad, India


- Extraction of data from the web into CSV format and build data tables in oracle using SQL and load and transform data using Informatica.
- Performing **seasonal analysis** on Indian railway data to estimate the increase in the number of passengers and preparing train schedules to accommodate them.
- Visualization and **analysis of KPIs** using Tableau.

EDUCATION

Computational Material Science (M.Sc.),


2019.10 – present | Freiberg, Germany


Technische Universität Bergakademie 

Subjects: Introduction to data structures and algorithms, Data science (machine learning), Stochastics, Software tools, Numerical analysis, High-performance computing (HPC), Semiconductors, Solid-State Physics. **Grade:** 1.83 

Mechanical Engineering (B.Tech.),

2013.10 – 2017.07 | Hyderabad, India

Jawaharlal Nehru Technological University 

Thesis: Virtual Sales Person (VSP)  – A mobile application that is used to navigate through a showroom using Bluetooth sensors allowing users to get information about the cars.


Tech stack: HTML, CSS, Raspberry Pi, Angular JS.

Grade: 1.80 

PROJECTS

Image Captioning using Deep Reinforced Learning,

2021.11 – 2022.02

Institute of Informatics, TU Freiberg, Germany 


Implementation of **Action to Actor**, a policy gradient method on convolution-based recurrent neural network for effectively describing the image in natural language.

Libraries: NumPy, TensorFlow.

Grade: 1.3

Solving Differential Equation using Neural Network,

2021.04 – 2021.08

Institute for numeric and mathematics, TU Freiberg, Germany 


A python package that can solve differential equations using a neural network based on LSTM like the Allen-Cahn equation which is used in the solubility of phases in metals. (**Physics informed neural networks-PiNNs**)

Libraries: NumPy, matplotlib, SciPy, Pytest

Grade: 1.7

Iso-geometric analysis-based topology optimization (NN-IGTO),

2020.11 – 2021.03

Micro-Mechanical Material Modelling, TU Freiberg, Germany 

Using Artificial Neural Network (ANN) for solving topology optimization problem performing sensitivity analysis, density filters and comparing with optimization Criteria and Method of moving asymptotes on NURBS based geometry in python.

Libraries: NumPy, Pytorch, Pytest, Paraview.

Grade: 1.1

AWARDS

Certificate of Excellence for Best project in Computational Material

2021.05

Science, Micro-Mechanical Material Modelling, TU Freiberg 

In fulfillment of the best Project Criteria in the Computational Materials Science Master's Program.

Certificate of Appreciation, New York Life insurance and TCS

2019.03

For my outstanding contribution and for efficiently implementing multiple projects.

LIREL Award, TATA Consultancy services (TCS) 

2018.03

CERTIFICATES

TensorFlow Developer 

Google inc.

Cloud Practitioner 

AWS

LANGUAGES

English (IELTS -7.5) • Germany (A2) • Hindi • Telugu