**Hariharavarshan Nandakumar**

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## EDUCATION

**University of British Columbia, Vancouver, Canada** September 2022 – June 2023

Master of Data Science - Computational Linguistics

Projects: [Fine Tuning Google LLM(FlanT5](https://github.com/HariWoverine/Coverletter_generator-using-FLANT5-and-ChatGPT)), [LightGBM classification](https://github.com/HariWoverine/MiniProject_lightgbm_classification), [House price prediction hosted in FlaskAPI](https://github.com/HariWoverine/House-price-prediction)

**Anna University, India**  June 2012 - May 2016

Bachelors of Engineering – Electrical Engineering

# TECHNICAL SKILLS

**Languages & Tools:** **Python**, **SQL, R**, **PySpark**, Pandas, Numpy, SciPy, Statsmodels, Hugging face, Scikit-learn, **Keras**, TensorFlow, **Pytorch**, Altair, MongoDB, Postgres, Docker, Github, **Power BI,** Linux GCP, BigQuery, VertexAI, Jira.

**Techniques**: Machine learning, Deep learning, A/B testing, NLP, **T5**, **Flan T5**, BERT, NLU, stochastic gradient descent, LSTM, **Large Language Models (LLM),** CNN, NER, Sentiment analysis, Transformers (Attention), clustering, Trees and Graphs.

# WORK EXPERIENCE – 7 years

# Prompt Engineer - Meta, Vancouver June 2023 – Aug 2023

# Worked on Llama2 personas that acts as an AI assistant models to Qualitatively measure the security and robustness of the models. Prompting for future Reinforcement ideas that needs to be incorporated.

# NLP Research Intern - Seasalt.ai, Vancouver Apr 2023 – June 2023

# Finetuned LLM models such as LLAMA, Alpaca, ChatGPT API to generate Chinese data set for training Nemo Punctuation toolkit to add Punctuation from ASR raw data with the help of Langchain package.

# Used GCP(Bigquey,VertexAI) to design, train and evaluate models on GPUs. Hosted the final fine-tuned models on GCP for productionizing.

# Data Scientist Consultant – HTC Global Mar 2022 – Nov 2022

# To read the Ingredients and Nutrition values from food items package, developed a Transformer architecture with finetuning BERT and OCR techniques. Deployed models using IAAS such as AWS Lambda, EC2 instance.

# Developed sentiment classification for customer surveys using seq2seq with attention, LSTM models.

# Deploying the model in ML Ops services to provide end‐to‐end services for frictionless training, validation, deployment and monitoring of ML models, including a CI/CD component for ML.

**Associate Data Scientist –** Royal Dutch Shell Jan 2021 – Jan 2022

# Enabling the UK retail team to take action on promotions and statistically (A/B testing) understanding if the promotion was successful understating grievances mentioned by the customers in the shell GO+ app.

# Crunched text data from app to classify sentiments and recognize entity using Goole’s Flan T5 based Algorithm and NLP augmentation. Deployed using Flask API. Thus increased the customer loyalty score by 8%

# Utilized ARIMA, SARIMA, exponential smoothing, and LSTM-based models to generate accurate short-term and long-term sales forecasts, resulting in a 10% reduction in forecast error. Deployed using Flask API.

**Senior Data Analyst** – Access Health Care Services Nov 2018 – Dec 2020

# Implemented Dynamic Work Allocation frame work by classifying the claims and employees pertaining to fraud by allocating claims according to their expertise and constraints using LightGBM and XG-Boost. (Supervised and Unsupervised)

# With Oversampling using SMOTE to balance the classes increased the performance productivity metric of the workforce by 13.8 % for an employee count of 11,000. The model is containerized using Docker.

**Data Analyst** – Infosys Ltd June 2016 – Oct 2018

# In operations TAT, developed Neural Netwrok models like LSTM to help the ticket assignment/Ticket Classification faster avoiding human bias. Created an all-in-one Power BI Dashboard for KPI management system.

## EXTERNAL PINPOINT

* **Business Analytics & Intelligence Program** from Indian Institute of Management-Bangalore 2019-2020  
  [Supply chain Analytics](https://courses.edx.org/certificates/c921c1dffaa1493fa7d4b142c1200925) scored 83% from Massachusetts Institute of Technology (MITx) Aug 2021