# [D:\Work\Resume\May-2022\github-logo-label-text-symbol-transparent-png-2425199.pnggithub-logo-label-text-symbol-transparent-png-2425199](https://github.com/varghesepaul-cp) [Varghese Paul CP](https://varghesepaul-cp.github.io/Varghese_Paul_Portfolio/) [png-clipart-linkedin-linkedin](https://www.linkedin.com/in/varghese-paul-ab2038a2/)

## Portfolio : <http://www.vpaul.in> [varghesepaul.cp@outlook.com](mailto:varghesepaul.cp@outlook.com) +91 9677258592

## **Summary:**

**Data Science Practitioner** with **6 years** experience in Software engineering and **NLP modeling** for **Samsung Bixby** - NLU and NLG, On Device AI solutions, **Cloud based Chatbot Solution**. Ability to **Build and Train Models** to production.

**NLP experience** - Sentiment Analysis, Semantic Similarity, Embedding Representations - Word2Vec, Sentence-BERT, Fast Text, Spam Classification, Log Analytics, Bixby User Utterance Analytics.

**ML experience** - Linear Regression, SVM, Decision Trees, Random Forest, XGBoost, Naive Bayes , Neural Networks.

**Cloud knowledge -** Data Science knowledge on Azure **( Microsoft Certified: Azure Data Scientist Associate - Certification Under Progress )** and basic practitioner knowledge on AWS.

**Languages/Libraries/Skills** : Python , SQL , MongoDB , SpaCy, TensorFlow , Keras , PyTorch , Fast Text , GenSim, nltk , scikit-learn , numpy , pandas , Jupyter Notebook , VS Code , Exploratory Data Analysis, Data Visualization and Tool Development for POC.

**Recognition -** Received **Samsung Excellence Award** and **Spot Award** from **Samsung Research India Bangalore** for contribution in Bixby and On-Device Bixby Productization.

## **Roles and Responsibilities:**

**May 2021 to Present -**   **Lead Engineer at Samsung R&D Bangalore, India**

* Developed NLP Models for Bixby Chat for Entity Recognition and Capsule (Algorithmic Handler) Classification.
* Developed NLG (Response) Model which will generate responses based on Semantic Similarity with Root Sentences using S-BERT.
* Perfomed Descriptive Analytics and Visualizaion on Market Utterances.
* Perfomed ETL on High Confidence Utterances for Bixby Training Data.
* Release Management and Deployment of Production Data in AWS.
* Bixby Log Analytics using Entity Recognition using LSTM and Fast Text

**Jul 2019 to May 2021 - Senior Software Engineer at Samsung R&D Bangalore, India**

* Developed Entity Recognizer using fasttext library, for dynamic validation of on-device models
* Performed model optimization and compression for edge deployment of on-device AI
* Performed model CI-CD using circle CI in staging environment
* Developed tool for model CI-CD monitoring in production environment using Node JS and Electron JS
* Model drift analysis using NLG diff algorithms based on fasttext embedding
* Data drift management on utterances (chatbot sentences) database

Jul 2019 to May 2021 - **Senior Software Engineer** at Samsung R&D Bangalore, India

Aug 2016 to Jul 2019 - **Senior Software Engineer** at Tata Elxsi, Bangalore, India

**Project #1 : Bixby**

Bixby is the Samsung Intelligent Assistant which is actively used by more than 10 million users globally .

Bixby chat is the module which I contributed mainly.

NLU - Entity Recognition , Weight mapping to words , word embedding .

NLG - Dynamic NLG Generation , Smart Suggestions .

Bixby User Utterance Analytics - Semantic Similarity between Sentences - Sentence-BERT and Cosine Similarity .

Sentence Classification using XGBoost.

Deployment

ML Solution in cloud

**Project #2 : On-Device Bixby**

On-Device Bixby is the On-Device Flavour of Bixby. Which uses Offline models to give responses to the users . Main Objective of the project was to enable users to use smart assistants even during poor or no-network coverage.

Word Embedding.

Planner Module.

Integrator Module.

Log Analytics.

Command Line Flavour Development.

Smart Suggestions.

**Project #3 : Chatbot Project**

Sentence Classification using Fast Text.

**Project #4 : Smart Food Classification**

Using Deep learning Models to Classify images.

**Project#5 : Predictive Modelling**

Mobile Price Prediction - Cloud Usage Prediction.

# **Education :**

|  |  |
| --- | --- |
| * **BITS Pilani, WILP**   2021 - 2023 | **MBA in Business Analytics** |
| * **SSN College of Engineering , Anna University**   2013 - 2016 | **Bachelors in Computer Science and Engineering**  73% |
| * **Panimalar Polytechnic College, DOTE**   2010 - 2013 | **Diploma in Computer Engineering**  96% |
| * **St. Joseph’s Matriculation Hr. Sec School,**   2010 | **Class X / SSLC**  90% |

**Declaration:**

I hereby declare that all the details furnished above are true to the best of my knowledge.

***VARGHESE PAUL CP***

Portfolio : http://www.vpaul.in

Github : https://github.com/varghesepaul-cp

Linked In : https://www.linkedin.com/in/varghese-paul-ab2038a2/