**Abhishek Byroju**

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**Professional Summary**

* Skilled AI developer with a background in Computer Vision, Deep Learning, NLP and Image Processing, Full Stack Dev , Android developer with Cloud Experience
* 6+ years of experience in developing & delivering customer centric software Applications.

**Work History**

**EXPERIENCE SUMMARY:**

* Build a Child Adoption POC, which is a bi-modal evaluation using Audio and Video based analysis , capturing emotions of child and adoption adults and generating a sentimental report based on the emotions detected. It was build using SOA hugging face Emotion detection model and CNN based Fine-tuned Age Detection model to capture emotions based on age-group.
* Building a Receipt Detection and Text Extraction using Convolutional Neural Network and NLP. Major idea is to detect the receipt, extract it removing the noise and detecting the text using Tensorflow object detection model and then running through OCR for extracting the text. Extracted text is then pre-processed using text pre-processing functionalities. Also built Flask Web service , deployed it on Kubernetes using Docker Container Services.
* Built an Image Segmentation model using Google Deeplab MobilenetV2 architecture with segments a luggage bag can be fit into a flight cabin space or not in order to control congestion while passenger flight occupancy.
* Built Server Failure Prediction tool using LSTM RNN model, which predicts when data cluster/server will breakdown using certain parameters (CPU RAM usage, memory load, CPU core loaded, etx) and alerts a message to server monitoring team
* Build an Android App for house painting visualization using OpenCV FloodFill and WaterShed Algorithm. It captures frame from android camera does image smoothening, transformation and then passed to Canny, then to WaterShed which provides a mask. Using FloodFill , we can color mask specific region selected by user on the frame

**EDUCATION DETAILS:**

* **B. Tech (**Information Technology)

**EXPERIENCE SUMMARY:**

* **Brillio (July 28 – Present):**
  1. **Project: Financial Data Extraction**

**Responsibilities:**

* + - Build Cheque Data Key Extraction Information using Custom trained Object detection model using pre-trained weights of SOA models along with using Image processing techniques to enhance image for noise removal, Image thresholding, Morphological transformations. Also used Google Tesseract OCR to extract data from detected ROI entities from OD.
  1. **Project: Unit Testcase Generator**

**Responsibilities:**

* + - Built Unit Testing Automated code generator using GenAI framework. Used OpenAI ChatGPT backend model to generate unit test code for production based code and reducing project development timeline to less than 50%.
  1. Built Customer ticket resolution application using monitoring tool data by converting them into embeddings(features) using OpenAI ada-embeddings model and then building a multiclass classification random forest model.
  2. Built finetuned Bert model for Question Answering feedback solution. It was trained on customer care conversational dataset. Solution was then hosted on Azure Functions app which will be triggered if there is an query from the customer and relative responses were prompted to customer along with few prebuilt recommendations.
  3. Built Solution accelerators to perform SpeechtoText conversion using Azure Services and then performing Text classification traditional Methodologies to build pipelines which can be plugged in as SDK’s for various industrial Usecases.
  4. Being part of Solution Design Architect Consultant for multiple On-going AI-ML RPA Projects and interacting with customers to help them understand how AI can be plugged into their legacy systems and automate them with minimal efforts.
* **Accenture (Feb 2021 -July 27)**
  1. **Project: Well Log Extraction**

**Responsibilities:**

* + - improve OCR extraction from Well Log PDF files by enhancing Well log images, removing noisy data (Lines, Small Patches, scrambled text) using Computer Vision OpenCV techniques.
    - Guiding Team on implementation of OpenCV techniques using C# and .Net Framework.

**Technologies Used:**

* Python, OpenCV, C#
* **Mindtree Ltd (July 2017-Jan 2021)**
  1. **Project: Travel Retail Android App (Availing DL & Android Applications as Service.)**

**Responsibilities:**

* Build tensorflow based keras Object detection and image classification model which will help users to shop their desired product from the store, all they have to do is to show the customer product image in mobile/pamphlet.
* Built an Android App that runs Object detection and Image Classification model to identify and classify the product, provide the product details and location of the product in the store.
* Also Added Azure Blob Storage plugin in the android app for storing live information and also tracking application usage

**Technologies used:**

* **Android Java, Deep learning TensorFlow API, Retrofit API Service, Azure Blob Storage Services**
  1. **Project: Perfect Selfie Web Based App**

**Responsibilities:**

* Build web-based App which allows users to take a perfect selfie (includes better light, distance from camera, head pose of the user and blur area).
* Used OpenCV for processing web video-based functionalities.
* Web Based application also used Tensorflow models which were quantized using tensorflowjs convertor

**Technologies used:** Html, JSS,OpenCV Library, Tensorflow JS

**SKILLS**

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| --- | --- |
| * Deep Learning, ML, CNN, RNN * TensorFlow, Pytorch * OpenAI, LLM models | * Microsoft Bot Framework * Kubernetes, Docker, WSO2 |
| * NLP * Python * Image Processing using OpenCV | * Java (Core and Enterprise) * Android * Microsoft Azure |
| * Kubernetes, Docker, WSO2 |  |

**LinkedIn Profile** [: https://www.linkedin.com/in/b-abhishek-235b86aa/](:%20https://www.linkedin.com/in/b-abhishek-235b86aa/)