**Sachin Kumar**

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# PROFESSIONAL SUMMARY

# IT Professional with 5+ years of experience in the industry, with experience in developing android applications and maintenance of various IT projects. Currently working on Interactive Voice Response platform which uses NLP based Automatic Speech Recognition to provide voice input to IVR. Have exposure building data models and applying machine and deep learning algorithms. Have sound mathematical knowledge and understanding of machine learning. Have experience working these years in Healthcare and Telecom domain, with delivering high quality IT product softwares. Experience of delivering various IT products and enhancement projects.

# SKILLS AND COMPETENCIES

**Technical:** Machine Learning, Deep Learning, Python, Image Processing, Computer Vision, Natural Language Processing, SQL, Decision Tree, Random Forest, SVM, TensorFlow, Keras, sklearn, Pandas, NumPy, Seaborn, Matplotlib, Clustering, Android framework, Java.

**Domain: Healthcare, Telecom, Automotive Vehicle infotainment.**

**Certifications/ Course Work:** AppliedAI, Computer vision(Udemy).

# PROFESSIONAL EXPERIENCE

***Sr. Software engineer* – Tech Mahindra**.

**May 2019 – Present**

**Projects –**

**AT & T (Voicetone IVR | developer) March 2020-Present**

* Working as a voicetone developer to enhance Interactive Voice Response for ATT customer services.
* This IVR platform is conversational, which behind the scene uses AI, using automatic speech recognition techniques to enhance and optimize cutomer experience.
* Work role involves managing IT applications through all the phases of software development life cycle. Also fixing bugs and timely release of the application to production.
* Responsible for developing database queries and updates.
* Skills – Core java, Vxml, Genesys, Rest API, Spring boot, SQL

**LG india/GM (Vehicle infotainment| Android developer) May 2019-Mar 2020**

* Worked as Android developer, building various applications for vehicle infotainment system.
* Owned some of the key projects from requirement gathering till production deployment.
* Was appreciated as a quick learner and for the technical expertise.
* Coordinated with the client and offshore teams.
* Skills – Android framework, Android auto, SQL.

***Software engineer* – Sasken technologies**.

**May 2018 – May 2019**

**Projects –**

**Sonim devices (framework development| Android developer)**

* Worked as a developer to fix bugs and enchancing the telephony framework issues in rugged android devices of Sonim.
* Skills – Java, Android.

***Android developer* – Neurosynaptic communications pvt. Ltd.**

**May 2016 – May 2018**

**Projects –**

**Remedi (Nova and Icare) ( Android developer)**

* Worked as Android developer, building apps for healthcare domain. Owned the projects from requirement gathering till production deployment.
* Developed the app from scratch based on the design of existing web app.
* App was used for remote consultation from a doctor. Used bluetooth LE for communicating with medical devices. Also used offline database along with server to keep track of customer medical records.
* Coordinated with customers to understand their requirements and provide best features according to their need.
* Skills - Core java, Android, Rest API, JNI, SQLite

# ACADEMIC PROJECTS

# I**nstacart market baset analysis**(Predictive model)

* Objective: Predict which of the customer’s past ordered products will be in their current order.
* Analysis: Identified useful columns in order to lessen the volume of data that needs to be processed, did analysis and featurization of train and test data, Performed Univariate analysis on the data columns, Imputed missing values.
* Models Built: Predicted the transaction revenue using combination of Classification and Regression models. Used Classification model to predict the probability that given customer would reorder a product in current order. Tried various classification models and used LightGBM as final model.
* Results: Performance metric used was mean F1 score. Above model resulted in score of 0.36 on Kaggle leader board.
* Use-cases: The model outcome could help company to recommend the products better to customer, saving time on repetitive shopping and let customer explore more new products. It also helps the retailers to manage and restock the products.
* Blog Link:- <https://sachukr.medium.com/instacart-market-basket-analysis-b979f5f1eb8>

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# **Scene image text detection (Bounding box detection**)

* Objective: Given a natural scene image detect all the arbitrary instances of text in it
* Models: Built U-net and Up-sampling based CNN architecture based on EAST model.
* Results: Using the model got train loss of 0.2833 and test loss of 0.2852 with custom loss functions. Used dice loss for binary classification for text polarity at pixel level. Used IOU loss and rotation angle regression for bounding box regression. Giving weight of 20 to angle regression improved box rotation.
* Use cases: With further improvemnts, the model can be used to detect text in noisy video or image in real time help in various fields like language translation, vehicle number plate recognition, street guidance, text-to-speech.
* Blog Link: <https://sachukr.medium.com/text-detection-in-a-natural-scene-image-134e386c4381>

# EDUCATION

# Synergy Institute of Engg. and technology, BPUT, Rourkela, Odisha, India

# **August** 2010- **May** 2014

*Bachelor of Technology, Computer Science*