

# Sahil MALIK

## PERSONAL DATA

---

PLACE AND DATE OF BIRTH: India | 19th July 1992  
ADDRESS: 4073 Sobha Daisy Green Glen Layout, Bellandur, Bangalore  
PHONE: +91 8904371685  
EMAIL: [sahilmalikjind@gmail.com](mailto:sahilmalikjind@gmail.com)

## WORK EXPERIENCE

---

*Current*  
AUG 2015

Senior Engineer Software Development at TIVO CORPORATION  
*NLP Conversation Engine*

Redesigning the rules/template based conversation engine to a more machine learning/A.I. based system. My work involves developing scalable and efficient solution to process natural language code in python. It involves using tools like NLTK, Scikit-learn, CRF to do NER-intent recognition and provide custom solutions to customers for voice interface. The product has been deployed in different languages like english, spanish, portuguese, german, italian etc. The product is currently being used by top cable providers in the world. [Product Video](#)

### *Stats Pipeline*

Designing and developing the stats collection pipeline using serverless architecture, focusing on minimising loss of events, making it available to any potential customer (internal/external) for immediate consumption. As an entertainment NLU service we generate a lot of stats, we need to be diligent about preserving those in databases and may need to be consumed by internal services for potential improvements and failure analysis.

Tech: Python3, AWS lamda, AWS SNS, AWS SQS, PostgreSQL.

### *Search & Recommendation*

Build, deliver and support cutting edge Search and Recommendation product to some of the top tier cable operators across the world. Prototyping new ideas and integrating the same with the base product while maintaining compatibility across versions.

JUL 2014-AUG 2015

Software Engineer at SAMSUNG RESEARCH INSTITUTE, Bangalore  
*App Development for Smart Android Printer*

Responsibilities included designing and development of apps for a smart android OS based printer.

Primary focus was to enforce code standards and detecting memory leaks by writing custom utilities as plugins for IDE. Resulted in app size reduction by 40 percent and better code coverage.

DEC 2014-JUNE 2015

Intern at SAMSUNG RESEARCH INSTITUTE, Bangalore  
*BYOD for MFP (Multi-function Printer)*

Implement this for the remote devices which are connected to MFP over wireless means. It involves discovery, selection, pairing, syncing and providing sophisticated user interface to user, perform jobs based on the requirement.

## EDUCATION

---

- APRIL 2014    B.E. in COMPUTER ENGINEERING, **Thapar University**, Patiala  
CGPA: 8.82/10
- MAY 2010    XII<sup>th</sup> H.D. Sr. Sec. School, Rohtak  
91.6%
- MAY 2008    X<sup>th</sup> D.A.V. Sr. Sec. Public School, Jind  
92%

## SCHOLARSHIPS AND ACHIEVEMENTS

---

- JULY 2010- APRIL 2014    Full Tuition fee waiver during graduation
- MAY 2018    First Prize in "TIVO Global Hackathon".
- APRIL 2019    Top Patent Filing Award.

## PROJECTS

---

- MAY 2018    PERSONALIZED QUERY MISTAKE CORRECTION ON A CONVERSATION SYSTEM  
This project was for "Tivo global hackathon", where we observed from real time customer logs that a significant number of the queries were failing just because ASR was not able to recognize what user was trying to convey due to accent, regional variations etc. eg. Wrong: "Game of Phones" Correct: "Game of Thrones". To correct the mistakes done by user during a conversation by learning the previous mistakes of the user. I used LSTM neural network to do sequence modelling, language models to predict the corrected query which was intended by the user.
- MAY 2018    PERFECT LOAN EVALUATOR  
Coded the project in Java using MySQL Database. MIS application to automate the tasks of Loan Processing Division like maintaining information of client, verifying information provided by client, checking eligibility of a client whether loan can be issued or not and finally issuing the loan.

## PATENTS

---

- FEB 2016    DYNAMIC COMPUTED SNEAK-PEEK PREVIEW VISUALIZATION  
PUBLICATION DATE: 25/08/2017, Indian Patent Office.
- MAR 2018    METHODS AND SYSTEMS FOR PERFORMING CONTEXT MAINTENANCE ON SEARCH QUERIES IN A CONVERSATIONAL SEARCH ENVIRONMENT.  
[Patent Link](#)  
W.O. Patent US 18/024360  
Status: Published

## TECHNICAL SKILLS

---

PROGRAMMING : Python, C, C++, Java

TOOLS & TECHNOLOGIES : NLP, AWS, Spacy, Scikit-learn, Scipy, Numpy, Git, MySQL, Android, Wireshark, Locust, Fuzzywuzzy, Fuzzyset, NLTK, Gensim, Word2vec, Pytest, PostgreSQL, Unicorn