

# SAI TEJA KANCHARLAPALLI

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L1003, Antriksh Kanball, Sector 77, Noida

## EDUCATION

**BITS-Pilani** | **Computer Science** | **2013-2017** | **Pilani, Rajasthan, IN**

**Narayana Junior College** | **Intermediate AP BIE** | **2010-2012** | **Vijayawada, AP, IN**

**ST. Francis English Medium High School** | **ICSE Class X** | **1998-2010** | **Machilipatnam, AP, IN**

## SKILLS

**Programming Languages** - Golang, Python, JavaScript, Java, JSX, HTML5, CSS, SQL

**Domains** – Full-Stack Web Development, Machine Learning, AI, Deep Learning,

**Technologies** – AWS, Container Orchestration, Distributed and Event based pipelines using Kafka/RabbitMQ.

**ML Frameworks** – Pytorch, Tensorflow, Keras, Huggingface.

## EXPERIENCE

**SAMSUNG R & D** | **Lead Engineer** | **Jul 17 – Present** | **Noida, IN**

Joined Samsung's TVPLUS team after graduation. TVPLUS is a Video-on-demand service for both transactional and ad-based services. As a part of this team, I worked on various domains of full stack development. At various stages I was also responsible for system designing to handle large scale systems that are client facing which involved high monetization.

### Achievements @ Samsung R&D

- **Employee of the year(Extra Mile in Innovation) 2020**
- **Outstanding Performance - 2019.**
- **2 Patent Awards.**
- **Recognized as a core member of Samsung(only 6% of global Samsung members are given such recognition).**
- 1 patent and two research papers are under review.
- Entrusted to participate in various decision and strategy meetings involving the very top management like MD, CTO, R&D Directors and was able to propose and convince such a leadership in bringing out the advanced technology into production.
- Besides the mainstream projects, I mentor and drive open innovation with a special task force of 10 members who gather, ideate and propose new ideas.

**Fraud Image Detection and Invoice Management** | **Tech. Project Lead** | **Jul 2020 - Current**

- Project lead for a team of 5 members, for development of Content Management System, along with Deep Learning Module.
- Developed Image tampering detection for photoshopped or morphed images using Steganography filters and Object segmentation techniques in Deep Learning, with system accuracy of 92%.
- Developed a first-of-its kind solution as **POC within 2 weeks** and presented the solution to stakeholders, and **successfully got the project granted.**
- With this solution **Samsung can mitigate a loss of about 110 crores** from the faulty invoices submitted.

**MonoTo3DAudio Using Visual Correspondence** | **Tech. Project Lead** | **July 2019 - Current.**

- Project Lead for a team of 5 members.
- Developed first of its kind Deep Learning based model, that can convert a mono and stereo audio of any video, to a 3D audio, using scene analysis.
- Worked closely with a professor from IIT-Delhi and achieved state-of-the art results in Audio Source Separation using visual correspondence. The model outperformed the existing techniques by a factor of 15% in all the evaluation metrics.

- In order to increase the efficiency and performance, I also proposed and developed an alternative approach, for which I received an **A1 grade patent**.
- This project has caught the attention of various subsidiaries including Samsung HQ(Korea). Currently **received a large grant to integrate the service** into Samsung streaming services.
- The results are being submitted to the prestigious Computer Vision conference – ICCV 2021.

#### **Conceptual Search Engine | POC - Commercialization | Dec 2018 – July 2019**

- To improve content discovery, proposed an idea of conceptual search, where users can describe the movie in natural language.
- Developed an advanced deep learning-based system, without affecting the current response rate or requests per second, by using advanced event-based pipeline and system design using Kafka and cache systems.
- The system improved the failed search results by an MRR score of 0.75, instead of no results and can cover the 40% search failure cases, also providing a freedom for users to search the content.
- The results **impressed our HQ stakeholders**, and **the module was launched as a full-scale production system** in Samsung TV's in the US.

#### **TVPLUS AD Mediation and Server-Side Ad Insertion | Team project | July 2018 – Dec 2019**

- Migrated the client-side Ad rendering to Server-side Ad Insertion.
- Developed a module to moderate the incoming HLS/MPEG-D streams as required by the media tailor to reduce the cost for setting up multiple configurations.
- Developed an AD Decision Server that provides VMAP manifest to media tailor to insert the ADs at appropriate stream intervals as defined in TVPLUS Admin.

#### **TVPLUS Admin | Team project | Dec 2018 – July 2019**

- Having an incredibly good experience in full-stack web development even before graduating, I was able to quickly guide and lead this submodule even as a fresher in Samsung.
- Part of 10-member team and developed the admin interface within a span of 3 months using Angular 5 and C#.
- From basic CMS to the configurations for Ads provided by the content provider that generates extremely high revenue, this project was launched successfully within timeline and a track record of no single production issues impacting the TV PLUS service.

#### **ORACLE FINANCIAL SOFTWARE SOLUTIONS | Software Development Intern | Jul 16 – Dec 16 | Bangalore, IN.**

- Developed data **management & visualization tools** for financial organizations.
- Developed a flow design application to **automate SQL query** generation using SVG, d3js and java.

#### **MARKET DATA FORECAST | Software Development Intern | Jan 16 – Apr 16 | Hyderabad, IN.**

- **Full stack e-commerce** web application using PHP, Knockout including secure integration of payment gateway.

#### **ROCKMETRIC | Software Development Intern | May 15 – Jul 15 | Mumbai, IN.**

- Developed **analytics tools to track user engagement** based on page scroll, video length watched, location-based user tracking.
- Implemented **query chaining techniques** to efficiently filter relevant data on client-side interface using JavaScript.

### **ACHIEVEMENTS and LEADERSHIP SKILLS**

- 4100 Rank in IIT-JEE
- 1200 Rank in AIEEE
- 394/420 BITS Admission Test Score
- Founding member of Coding club BITS-Pilani
- Scholarship Committee Student Head, BITS-Pilani
- Student Pupil Leader in High School