Suraj Pai

Innovator at Digital Impact Square

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Born to a family of doctors, I was the black sheep, tinkering with computers and ever fascinated by technology. But when you grow up in a household where medical jargon dominates conversations, a certain sentiment toward it develops. I developed a passion to work with health and medical technology. I find it very satisfying to help add value and technology to betterment of healthcare and enabling systems to play my part in helping the society.

EXPERIENCE

Digital Impact Square

June 2016 - November 2016 (6 months)

Innovator

Social Innovator at TCS Foundation's Digital Impact Square in collaboration with MIT Media Labs. Digital Impact Square is an open social innovation platform designed to enhance the lives of citizens. The platform encourages innovation using digital technologies, to address the needs of citizens through their voice and that of the local administration, government, and industry. At DISQ, I was a founding member at Team Signify- Creating a system to provide free communication and a voice to the deaf and dumb community.

Responsibilities held: **Pioneered field research at a school for hearing impaired students and helped develop technology to be used as a teaching aid for sign language which would reduce teaching time**. Worked with the Technical Team to develop automation scripts in Python to extract data from YouTube videos, **process subtitles and run NLP on the text data. Also used speech processing libraries to obtain individual word timings.** (Python libraries used: youtube-dl,pysrt,TextBlob,SpeechProcessing) As a part of the executive team, **met various stakeholders, government officials and private institutions to gain insights from them and improve the product.** Discussed with a panel of special educators on what role technology could play in improving lives of the hearing disabled.

MIT Practice School

January 2016 - June 2016 (6 months)

Researcher

MIT Practice school offers faculty-driven research based opportunities to their final semester students. I worked with a team of 3 under the guidance of Dr. T. K. Padma Shri on **Sign Language classification using Computer Vision The role involved: Developing and testing various optimization algorithms for Supervised Learning (Mainly MLP, SVMs, Binary MLP, Statistical Classification etc.) to train a Sign Language Classification system.** Insights and AUC ROC plots were plotted comparatively offering a clear cut visualization into each algorithms performance. Collaboration with a team of 3 members to optimize code and develop a final working prototype using the Microsoft Kinect and software APIs to classify 3 gestures in real time. (Software used: MATLAB and Kinect Runtime Libraries). **My role centered around data cleaning and visualizations along with optimizations.** The project, presented to a panel of subject experts and researchers, obtained an A+ project rating.

Stanford Crowd Course Initiative

2016 - 2016 (less than a year)

Participant

Stanford Crowd Course is an initiative spearheaded by Prof. Sharad Goel, Prof. Amin Saberi and Dr. Rajan Vaish. It facilitates people to collaborate and share their knowledge with others by creating courses on diverse topics. As a part of this initiative, I **contributed content mainly to the course, " Practical Machine Learning with Python"** and received #21 Thank yous. (Thank yous are a way of measuring contributions made to the course in scale.) I also helped translate " Introduction to Python" to Hindi aimed to target the Indian audience.

Go-E-Code Technologies

June 2015 - August 2015 (3 months)

Embedded System Developer

My responsibilities as a developer: Developed IoT applications on 8051 and ARM based boards Sensor and Timer based projects

The EOS Initiative

March 2014 - December 2014 (10 months)

President

The EOS Initiative is associated with the empowerment of the slums. A group of students who want to change their lifestyle for their betterment. Duties as the Founder and President: Lead a team of 7 permanent members and volunteers Workshop, Event creation and management Product Design and Development

FlowBook (www.flowbook.in)

January 2016 - Present

Content Development Freelancer

Freelancing for a company that develops video lessons and modules to enhance visual learning experience to complement textbook and classroom learning.

My position entails content curation and developing scripts for topics germane to supplement NCERT content. I work mostly with Math for 9th and 10th grade.

EDUCATION

Manipal Institute of Technology

2012 - 2016

Bachelor of Engineering (BE), Electrical, Electronics and Communications Engineering,

CGPA : 8.25

Scholarship student for Electronics and Communications Branch.

Activities and Societies:

AIESEC Incoming Exchange Team

AIESEC Finance and Exchange Development Team

AIESEC Information Management Team

SKILLS & EXPERTISE

Machine Learning, NLP, Data Analysis with Python, Visualization with Tableau, AWS, Heroku, Chatbot Development, Back-end with Django and Flask, API.ai, Wit.ai, Graphic Design with Illustrator and Photoshop

PROJECTS

Home Automation

October 2015 to Present

Members:Suraj Pai, Dhaval Doshi, Kunal Obhrai

IFTTT algorithm based control.

IlluminAid

April 2015 to Present

Members:Suraj Pai, Nayan Mehta

Sustainable light source that charts among low cost alternatives for conventional sources. This also doubles

Black Adam Bot

December 2016 to Present

Members: Suraj Pai

Recognizing your Music on the fly via messenger. Provides information about related genres, artists and The bot was featured on Botlist.co and Qwazou bot discovery platforms. 108 queries were initiated.

First Aid Bot

January 2017 to Present

Members: Suraj Pai

A Facebook messenger chatbot that serves as a comprehensive guide that covers all aspects of basic first aid awareness. Powered by information from British Red Cross.

Hackman Competition Bot

February 2017 to Present

Members: Suraj Pai

Bread First Search based bot for maximizing points in an automated bot competition

Airplane Crash Data Visualization

https://medium.com/@surajballambat/the-limitless-skies-1bbf83f4457b

Visualization Project to interpret data from Airplane Crash Records from 1908 to 2009

VOLUNTEER EXPERIENCE

Teaching Assistant at San Zhao Elementary School, Sichuan, China

June 2013 - Present

Volunteered for a Cultural Exchange with Renmin University to promote community development. As a exchange volunteer, I was assigned the following roles: Teaching assistant and course curator for a class of 50 children in the fifth grade. Course Curriculum Design Conducted classes for Basic communication skills in English, Inter-cultural awareness.

LANGUAGES

Kannada (Professional working proficiency),   **Konkani** (Limited working proficiency),   **Hindi** (Professional working proficiency),

English (Native or bilingual proficiency)