

Smart India Hackthon-2020 First Prize

Heading: Vidyanikethan Engineering College Students' Web Application for promoting holistic nutrition among Women and Children wins one Lakh rupees in Smart India Hackathon 2020.

A Team called as "TechnoRubies" of SIX B. Tech, II Year (II Sem.) students Pyda Deepanvi, Naisa Shalini, Neelakanti Vineetha, Ravooru Keerthana, Yenamareddy Lakshmi Devi and Pasurla Janani from the department of Information Technology, Sree Vidyanikethan Engineering College (Autonomous), Tirupati, Andhra Pradesh, mentored by Dr. V. Lokanadham Naidu, Asst. Prof. (SL) of IT has participated in the World's biggest coding platform Smart India Hackathon 2020 organized by MHRD, MHRD's Innovation Cell and AICTE during August 1-3, 2020, and won the prize money of one Lakh rupees for developing the web application to the problem statement "Promoting holistic nutrition among women and children with the help of IT for POSHAN Abhiyaan" given by the Ministry of Women and Child Development, Govt. of India. The developed web application helps health workers AWWs (Anganwadi Workers), ASHA (Accredited Social Health Activist), ANM (Auxiliary Nurse Midwife) to improve the utilization of health services such as Supplementary Nutrition and Immunization among women and child by sending SMS notifications to get the upcoming dose on time. And also, it helps the officials of ICDS (Integrated Child Development Services) and NRHM (National Rural Health Mission) to monitor the delivery of health services through Dashboards for reducing the malnutrition. The HoD (IT), Deans, Directors, Principal, Mr. Vishnu Manchu (CEO, SVET) and Dr. M. Mohan Babu (Chairman, SVET) appreciated the students for achieved this at National level.

SIH 2020 – Virtual Grand Finale

Smart India Hackathon (SIH) 2020 Virtual Grand Finale (Software Edition) is held during August 1-3, 2020 at 41 Nodal centers all over India to monitor and evaluate the Models/Applications that are developed by student teams for the problem statements given by various Central & State Ministries, Departments, PSUs, Industries and NGOs.

Other Details that are related to the SIH 2020 (Software Edition):

- Total Number of Problem Statements: **243**
- Total Number of Teams participated in SIH 2020: **1215**
- Total Number of Students participated in SIH 2020: **7290**
- Total Number of Nodal Centers involved in organizing the SIH 2020 virtual grand finale: **41**

The team **TechnoRubies** from SVEC is participated in SIH 2020 Virtual Grand Finale, organized by JECRC University (SIH Nodal Center), Jaipur, Rajasthan. Experts from the Industry and Ministry of Women and Child Development officials evaluated the web application that is developed by students and then selected as a Winner out of 5 teams against the problem statement "Promoting holistic nutrition among women and children with the help of IT for POSHAN Abhiyaan (AS124)".

PROBLEM DETAILS

Problem Statement (Given by Ministry of Women and Child Development)

Promoting holistic nutrition among women and children with the help of IT for POSHAN Abhiyaan

Problem Description

- Promoting holistic nutrition among women and children through/with the help of IT for *Poshan Abhiyaan*.
- Design a system for health worker to monitor and trigger alarms if some women/child have not come for upcoming dose.
- Additionally, if mobile number of the patient is registered then provide notification to them to get the dose.

TEAM DETAILS:

Team Name: TechnoRubies

Student Name	Roll No.	Year and Semester (Section)
Pyda Deepanvi*	18121A1284	II B.Tech, II Semester (IT-B)
Naisa Shalini	18121A1268	II B.Tech, II Semester (IT-B)
Neelakanti Vineetha	18121A1272	II B.Tech, II Semester (IT-B)
Ravooru Keerthana	18121A1286	II B.Tech, II Semester (IT-B)
Yenamareddy Lakshmi Devi	18121A12B2	II B.Tech, II Semester (IT-B)
Pasurla Janani	18121A1274	II B.Tech, II Semester (IT-B)

* *Team Leader*

Team Mentor: Dr. V. Lokanadham Naidu, Assistant Professor (SL), IT.

DETAILS OF THE DEVELOPED PROJECT

Developed a Web application for promoting holistic nutrition among children, pregnant women and lactating mothers as well as monitoring the health services that are provided by health workers (AWWs, ASHA and ANMs).

Objectives of the Project

- To improve the utilization of Anganwadi, ASHA and ANM services for reducing malnutrition and providing immunization.
- To monitor the quality and delivery of health services for target beneficiaries.
- To link ICDS and NRHM services for Supplementary Nutrition, Immunization and primary health care to women/children.

Salient Features of the Project

- Women/child registration by AWWs, ASHA and ANMs at Anganwadi, Village and Sub-center level respectively.
- User login using an Unique Id "Aadhaar Number".
- User sign-up, authentication and approval at different levels for secure access of a web application using OTPs, Session handling and Encrypted passwords.
- Recording health details of children/women on every visit at AWCs and Sub-centers.
- Monitoring for upcoming dose by ASHA/ANMs, if some women/child have a due on dose.

- Automatic SMS notifications to registered women/child prior to the date of dose for getting the dose on time.
- Providing login for Women/child to check their next dosage details.
- Developed Dashboards that shows the utilization of health services, beneficiaries, dosage dues and nutrition status of children.
- Provided a facility to configure villages, AWCs, Sub-centers and PHCs.
- Monitoring the utilization of health services through Reports and visualization at different levels of ICDS and NRHM hierarchy.
- Referral services from ICDS to NRHM.
- Sending important notifications to health workers from higher officials.

TECHNOLOGY STACK USED:

Category	Technology/ Language/ Framework	Usage
Frontend design	HTML5, CSS3, JavaScript and Bootstrap	<ul style="list-style-type: none"> • To design user-friendly frontend web pages.
Server side scripting	Python 3.8.1	<ul style="list-style-type: none"> • To process the user requests and responses. • To access/store data into SQLite database. • To generate statistical reports and provides data visualization using pandas framework.
Python web framework	Flask 1.1.1	<ul style="list-style-type: none"> • To set-up WSGI web server. • To develop and deploy web applications using libraries, tools/server technologies of a Flask.
Web template engine	Jinja2	<ul style="list-style-type: none"> • To render the responses generated by web server into Hyper Text form. (It is a Text-based template engine for Python that supports templates for expression evaluation, variable declaration with scope, decision making, looping, and modularity)
Backend database	SQLite 3.31	<ul style="list-style-type: none"> • To store user details and manage user accounts. • To store medicine/vaccine details. • To maintain health records of patients.
SMS Web API	FAST2SMS API	<ul style="list-style-type: none"> • To send SMS to registered mobile numbers from the proposed application.

SELECTION PROCEDURE (To participate in SIH Grand Finale):

1. Innovative Idea/Prototype submissions will be invited from the student teams of India for providing solution to each problem statement. (Any number of teams can submit their idea to any problem statement at national level). But, only 7 teams will be allowed to submit ideas/prototypes from each AICTE college. The College SPOC, SIH will select 7 teams for submitting ideas by conducting internal Hackathon at college level.
2. Submitted ideas are scrutinized by SIH committee and then 5 teams will be selected for each problem statement based on the innovative idea/prototype that is submitted by student teams.
3. Selected 5 teams will be participated in the Grand Finale SIH 2020.
4. Solutions that are developed by teams at Grand Finale will be evaluated by industry experts and the concern Ministry/Organization/Department.
5. Out of 5 teams either **One** or **None** will be selected as a winner per problem statement.

Student Photos:

Student Name	Photo
Pyda Deepanvi	
Naisa Shalini	

Neelakanti Vineetha



Ravooru Keerthana



<p>Yenamareddy Lakshmi Devi</p>	
<p>Pasurla Janani</p>	