

# Ritu Sinha

Computer Science Graduate adept at writing, testing & debugging code & conceptualizing, and designing new software programs.

## WORK EXPERIENCE

### Lowe's India, Bangalore — Associate Software Engineer

AUGUST 2021 - PRESENT

Working under the Data Analytics And Computational Intelligence Team. I am currently involved in a project which enables users to gain better business insight and estimate the various trends, identify the major demand influencing factors and provide an analysis of the current performance.

### Mysore Steel Products, Bangalore — Software Development Intern

MARCH 2021 - JUNE 2021

Developed a web and mobile application which facilitates users with the purchase of company products in a user-friendly manner. Here I learned full-stack web and mobile application development using the MEFN stack (MongoDB, ExpressJS, Flutter, Nodejs).

### Samajh.AI (Mixorg Consulting Services), Remote — Web Development Intern

MAY 2020 - JULY 2020

Developed a portal from where users can obtain the images of social events using facial recognition and clustering algorithms. I also learned deployment of applications in the cloud using AWS (Lambda for functions, EC2 for the entire system), Vue JS for the development of the web portal, and Mxnet for facial recognition.

### Indian Institute of Science, Bangalore — Summer Intern

JULY 2019 - AUGUST 2019

Developed a deep learning reinforcement system for power control in wireless multicast networks using Python and Tensorflow library. Here I learned about deep reinforcement learning and sharpened skills in Keras.

### Foxmula, Bangalore — Intern

JANUARY 2019 - MARCH 2019

Understood the intricacies of Machine Learning and completed a project by analyzing a dataset of players in order to determine the winner of the game. Here I gained exposure to various activities in the Machine Learning domain and implementation of Clustering and Regression algorithms.

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## EDUCATION

Ramaiah Institute of Technology

AUGUST 2017 - AUGUST 2021

Bachelor of Engineering, Computer Science and Engineering

CGPA : 9.65/10

## SKILLS

### Programming/Scripting

Languages: Java, Python, MATLAB, C++, C, SQL, JavaScript

### Database Management:

Firebase, MongoDB, MySQL, SQLite

**Frameworks:** Android, Flutter, Flask, Django, Angular, Vue, React, Express.js, Nodejs, MX Net

### Cloud computing platforms:

Google Cloud Platform, AWS Lambda, EC2, Azure LUIS

## PRESENTATIONS

### Best Paper, Women in Engineering Track

2020 : Received for the paper titled 'Design of a Real Time Train Control and Management System' at the IEEE Bangalore Humanitarian Technology Conference

## SELECTED RESEARCH PROJECT EXPERIENCE

### Increasing the Productivity of BYODs (Bring Your Own Devices) to the Classroom, Cisco Systems, Bangalore

FEBRUARY 2020 - JUNE 2020

This work consisted of the development of a portal to create, modify, and monitor access control policies in order to control student access to the internet during class hours. This was done using Cisco Firepower Threat Defense, with a web portal for faculty implemented using Flask.

### Legal Text Summarizer and Information Extraction System, Unisys, India

DECEMBER 2019 - MARCH 2020

This work consisted of the development of a system that is able to generate summaries and extract information from legal documents. This information can be queried using a chatbot developed using Microsoft LUIS Service. A specialized plugin was developed specifically for terms of service documents which used a Transformer model to recognize sentence polarity. Technologies used include Django, Microsoft LUIS Service, Tensorflow, Tampermonkey, HTML, CSS, and JS.

## SELECTED ACADEMIC PROJECT EXPERIENCE

### Consortium Blockchain-Based IoT Identity Management

JANUARY 2021 - JUNE 2021

This work proposes a consortium - blockchain-based identity management technique for the Internet of Things (IoT) and describes the associated protocols, to address issues in a centralized identity management system. In addition, the system leverages the Fog computing paradigm to address latency and performance issues during heavy load scenarios. Evaluation of this work is done by measuring latency and throughput for different payload sizes and actions.

### Building Utility System to Analyze Diseased Plants using Deep Learning Algorithms

FEBRUARY 2020 - AUGUST 2020

This work consists of detection of leaf disease in tomato, potato, and bell pepper leaf where users can upload images and obtain the predictions of 3 different CNN architectures with the required accuracy and a saliency map indicating focused features on the leaf.

### Semantic Segmentation of Satellite Imagery

JANUARY 2020 - JUNE 2020

This work consists of the implementation of a modified U-Net model to identify the different regions in a satellite image and segment based on features of the land such as roads, croplands, etc. This was performed on the open DSTL Satellite Imagery dataset.

## ACHIEVEMENTS

### Finalist, Smart India Hackathon 2020

Development of a disaster response system to ensure immediate reporting and resource deployment.

### First Place, Codefury 2.0

2019

Developed an Android shopping portal that encourages secure collaborative buying.

### First Place, Iskcon Hackathon 2019

Android application that facilitated the appointment of students with their guides that worked at different levels of hierarchy

### Runner Up, Rocketbuild Hack 2019

Developed a police patrol monitoring system to keep a tab over officers and allow easy reporting of emergencies

## ACTIVITIES

**Core Member, CODERIT 2020** - Organized and conducted various competitions and workshops at college, mentoring juniors in various domains of Computer Science.

**Participant, Nature Club Walkathon 2018** - Promoted a green Diwali by saying no to crackers

**Volunteer, Sukrupa NGO 2014-** Tutored 40 underprivileged students of grades 4, 5, and 6 in subjects like Math, science, and history.