



# SRI RAMAKRISHNA ENGINEERING COLLEGE

[Educational Service: SNR Sons Charitable Trust]

[Autonomous Institution, Accredited by NAAC with 'A' Grade]

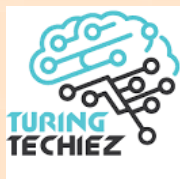
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VATTAMALAIPALAYAM, N.G.G.O. COLONY POST, COIMBATORE – 641 022.



## DEPARTMENT OF COMPUTER SCIENCE ENGINEERING & DEPARTMENT OF INFORMATION TECHNOLOGY in association with



### Organizing an Intra College Event **AN EIGHT HOUR AI HACK-A-THON**

On  
14<sup>th</sup> September 2019

#### CONVENOR

Dr. A. GRACE SELVARANI, Prof & Head/CSE

Dr. M. SENTHAMIL SELVI, Prof & Head/IT

#### Faculty Co-ordinators

Mrs. N.Saranya, AP(Sr.G)/IT, 9095493113

Mrs. M.Sri Geetha, AP/CSE, 9500853297

#### Club In-charge

Dr. R. Anuradha, Asso.Prof/CSE

### About Turing Techiez

Turing Techiez is an SREC AI students club started in 2018. This Club aims at transforming SREC Next Revolution in providing AI man power to the world. The objective is to equip the students with the ability and skills to analyze, design and develop AI based computer systems.

### About the AI HACK-A-THON

This intra college AI hack-a-thon aims to exhibit students hidden talents in developing AI based solution to real time problems. This also intend to incorporate inter disciplinary culture between the students.

**Pre-Event Discussion: 12<sup>th</sup> Sep 2019**

**AI HACK-A-THON: 14<sup>th</sup> Sep 2019 (8:30am to 4:30pm)**

**Final Presentation: 14<sup>th</sup> Sep 2019 (4:30pm to 6:30pm)**

**Registration Fee: Rs. 500/- per Team**

#### Criteria for Team Formation

- Maximum team size: 4 members (excluding Mentor)
- Inter disciplinary team with at least one third or second year
- One member should be Turing Techiez
- One Mentor (any department)

**Attractive prizes to be won along with some cool internship and mentorship support from industry**

**For Registration and Problem Statement Visit**  
**<http://srec.ac.in/ai/news.html>**

## **Industry Proposed Problem Statement**

### **1. Recommendation System**

There's an e-commerce store

- when a user visits a product page, similar items to the item being viewed must be shown below.
- reviews for a product must be categorised based on "emotion"
- seasonal recommendations should be shown up front when a user opens the site.
- if you add items to cart, items which are frequently bought together should be shown below the cart.

### **2. Prediction from log data**

There's an application running on a server. The application logs data into log files. All exception logs and access logs are maintained. The log file format is something like:

```
{ "level": "WARNING", "timestamp": 1565592521000, "message": "An exception occurred while updating data.", "data": { "id": "2d5cab72-f733-4b83-a698-fc4f2d203258", "value": 9123 }, "id": "229ff584-8201-4412-9fd4-8fe2721b218f" }  
{ "level": "CRITICAL", "timestamp": 1565592521045, "message": "Updating data failed.", "data": { "id": "2d5cab72-f733-4b83-a698-fc4f2d20cd58", "value": 9123 }, "id": "229ff584-8201-4412-9fd4-8fe212312123" }
```

(The above is just an example. Logs can have any number of details. Get a log dump from some software for better understanding.)

The application crashes when a CRITICAL level error occurs causing unsaved data to be lost. Not all types of WARNINGS lead to CRITICAL errors. Can deep learning be used to predict when the application will crash so that administrator can warn the user or take mitigative actions?

### **3. Text prediction**

Context sensitive predictive text input: When a user is typing in a textbox in an application, it would be cool if the text box could suggest text to input depending on the context. Say, I'm filling in values in a field which asks "How did you feel about our product?", the suggestions could be "great", "awesome", "not good", etc. And when the user switches to another question which asks "Would you recommend our product to your friends?" the suggestions could be "yes", "no", etc

## **General Problem Statement**

### **Health care**

- i) Dermatological disorder identification.
- ii) Chronical disease Prediction
- iii) Oncology, Pathology based disease identification
- iv) Chatbot for hospital maintenance

### **Agriculture**

- i) Plant health detection
- ii) Fruit quality identification
- iii) Crop yield prediction
- iv) Chatbot for subsidiary schemes for farmers

**Predictive Maintenance**

i) Monitor machine/equipment failure and schedule maintenance with any kind of machine in any industry

**Vehicle Governance**

- i) Traffic Analysis
- ii) Vehicle type Identification in Indian roads
- iii) Traffic signal control based on crowd detection

**Cyber Security**

- i) Network intrusion detection and prevention
- ii) Cyber-attack forecasting
- iii) Botnet Detection
- iv) Chatbot for identification & notification for intrusions
- v) Face detection in video surveillance

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