Mohammad Hasnain Rajan

INFORMATION TECHNOLOGY UNDERGRADUATE

Versova, Mumbai, India

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Summary

My core interests lie in applying my programming, Software development and Data Science skills towards solving real world problems. Over the last 4 years while pursuing engineering, I have worked towards various projects, publications and certifications. I can learn skills quickly and adapt to new tools and technology with ease.

EDUCATION

MCT's Rajiv Gandhi Institute of Technology   *Versova, Mumbai*

B.E. INFORMATION TECHNOLOGY   *July. 2016 - Exp. May. 2020*

CGPA : 9.2/10 (till 7th semester), Rank in Major : 1

Mithibai College   *Mumbai*

HIGHER SECONDARY CERTIFICATE (HSC)   *2015 - 2016*

SCORE : 79.23%

CWC High School   *Mumbai*

SECONDARY SCHOOL CERTIFICATE (SSC)   *2013 - 2014*

SCORE : 88.2

EXPERIENCE

NII Consulting   *Mumbai*

INTERN – INNOVATIONS AND RESEARCH – PYTHON/DJANGO   *Dec 2018 – Jan 2019*

- Programmed in python to generate Ad-hoc and periodic reports and deliver them via Email.
- Generate graphs relationships from logs collected by loggers in various systems.
- Also wrote python code that processes data generated by various networking tools such as Nessus and store them in Elasticsearch in a standard format.

Ugam Solutions   *Mumbai*

CONSULTANT – DATA SCIENCE FOR THE PROJECT MEANINGFUL INSIGHTS   *Jun 2018–July 2018*

- Extract and clean sales data from CRM and analyze it to find trends to provide insights.
- Feature Engineering and trained machine learning models like Random Forest, Decision Tree, Logistic Regression for sales prediction
- Pandas for data cleaning and preprocessing. scikit-learn for model training. Flask for model deployment as a REST api

Publications

Smart Home Automation Using Computer Vision And Segmented Image Processing   *Melmaruvathur, Tamil Nadu*

AUTHOR   *April 2019*

- Research Paper explaining our approach on the project Smart Home Automation Using Image Processing
- IEEE ICCSP 2019

Energy-efficient face recognition authentication system using human detection IoT modules (Accepted)   *Mumbai, Maharashtra*

AUTHOR   *April 2020*

- In this paper we explain our approach to reduce energy consumption in face recognition systems deployed in various environments for authentication. We use various IOT sensors to achieve the same
- IEEE CSCITA 2020

PROJECTS

Emotionally Intelligent Virtual AI Companion/ MYK

BE FINAL YEAR PROJECT   *July 2019–Now*

- Did extensive Literature Survey to learn about various Artificial General Intelligence projects and Theories
- Transfer Learning Bert for generating responses
- Text Mining to represent the input and history as graphs to save context
- Working towards creating voice and animated interfaces to the Companion

Chart Analytics ([GitHub repository](#))

PERSONAL PROJECT *June 2019–Now*

- Trained a custom CNN for classification of the charts
- Extracted Charts such as Bar Chart with their labels from FigureQa Dataset
- Using OPENCV for application of Image Processing techniques to extract numerical information from the charts

Smart Home Automation Using Image Processing

PERSONAL PROJECT *Jul 2018 – Oct 2018*

- Human Detection Using SSD with Mobilenet
- Image Processing using OpenCV
- ESP-8266 for wireless communication with Raspberry Pi.
- Arduino to control Electrical Appliances

Cyberbot ([GitHub repository](#))

BE ARTIFICIAL INTELLIGENCE MINI PROJECT *Aug 2019–Oct 2019*

- A bot that answers Natural Language queries for a specific vulnerability given by user
- Wrote code that does transfer learning on Bert for the Question Answering
- Coded a finite state machine in python to manage states

Courses And Certifications

- Computer Vision Nanodegree by Udacity
- Algorithmic Toolbox by UC San Diego from Coursera.
- Image Processing by Duke University from Coursera
- Deep Learning Specialization by Deeplearning.ai from Coursera.
- Programming, Data Structures and Algorithms using Python by NPTEL
- Machine Learning by Andrew Ng, Stanford online from Coursera.

SKILLS

Programming Languages	Python(Expert), SQL(Expert), HTML(Intermediate), Javascript(Intermediate), C/C++ (Intermediate)
Platforms	Linux, Windows, AWS (basic)
Frameworks	Tensorflow, Keras, Git, Django Rest Framework,Scikit-learn, Hadoop(basic)
Area(s) of expertise	Python Programming, Software Engineering, RESTful API's, Machine Learning, Deep Learning, Computer Vision, NLP Image Processing, System Design(Intermediate), Software development life cycle(Intermediate)
Relevant coursework	Data Structures and Algorithms, Discrete Mathematics, Linear Algebra, Calculus, Artificial Intelligence, Cloud Theory of Computation, Databases, Data Mining, Soft Computing, Computer Networks, Operating Systems
Honors & Awards	Winner at Unscript 19 Hackathon (Role: Leader Of the team) Finalist at Smart India Hackathon 2019 (Role: Leader Of the team)