

# Rehan Guha

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## Summary

To talk about myself is a bit of a challenge for me as I more comfortable while talking about my work and discussing about Philosophy & Science.

Let me start by giving a simple introduction about my work. I am a Senior Machine Learning Researcher presently employed by product based company. I have worked in several ML projects mainly dealing with Optimization Problems, Explainable AI, Deep Learning, Imbalance Classification, et cetera...

I am also the author of a book "Machine Learning Cookbook with Python" published by BPB publications. I have been part multiple publications through Journals and Open Publications, along with this I have few applied patents to my name.

Recently I was invited by Arizona State University to be a part of their team participating in CPS challenge 2020 funded by National Science Foundation(NSF), USA and sponsored by NASA. I have also conducted multiple workshops, seminars in this field of research for various universities and made contributions to Open Source Software as well.

## Experience



### Senior Researcher

Pramati Technologies Private Limited

Oct 2019 - Present (1 year 5 months +)



### Senior Data Scientist

Imaginea Technologies Inc.

Oct 2019 - Present (1 year 5 months +)

== VERANA ==

Role: Managed the Data Science team of 2 including myself from Imaginea. Actively worked on their clinical dataset for increasing their coverage and accuracy for their existing scripts.

Stack: Python, PySpark, AWS, NLP

We worked on some of their existing code and increased their accuracy and coverage percentage. We developed an address extraction script from a given document using NLP.

== BAIN ==

Role: Responsible for analyzing the CLV and building a Data Analytics dashboard.

Stack: Tableau, Python, Microsoft Excel

The project involves analyzing the survey data and figuring out the CLV. It also entails creating a Tableau Dashboard that analyzes all the features in a single dashboard.



### Book Author

BPB

Aug 2019 - Nov 2020 (1 year 4 months)

I am thrilled to announce finally a year-long endeavour came to an end.

A Cookbook that will help you implement Machine Learning algorithms and techniques by building real-world projects.

#### Key Features

- Learn how to handle an entire Machine Learning Pipeline supported with adequate mathematics.
- Create Predictive Models and choose the right model for various types of Datasets.
- Learn the art of tuning a model to improve accuracy as per Business requirements.
- Get familiar with concepts related to Data Analytics with Visualization, Data Science and Machine Learning.



#### Participant

National Science Foundation (NSF)

May 2020 - Jun 2020 (2 months)

2020 CPS Challenge "SoilScope -- Mars edition":

Mars 2020 inspired mission scenario for the 2020 NSF CPS Challenge will be a two-week virtual event, emulating an autonomous probe deployment science mission by a rover and drone duo, at the Jezero crater landing site.

Organizer:

Arizona State University, NASA



#### Researcher

Pramati Technologies Private Limited

Oct 2018 - Sep 2019 (1 year)



#### Data Scientist

Imaginea Technologies Inc.

Oct 2018 - Sep 2019 (1 year)

== RPX Corporation ==

Role: Handled Litigation Likelihood (LitLikelihood) module of the project – from data analysis to production deployment.

Stack: Python, Flask, Unicorn, Machine Learning (LGBM)

In this project, the data (~12M records) requires a lot of transformation where some major errors have been observed leading to a drastic improvement in the prediction accuracy. Therefore, LightGBM has been used here and the model is accepted by the client as well.

Other projects:-

- Imbalance Learning with Probabilistic Scoring with Binary Classification
- LDA Topic Clustering



#### Associate Software Engineer

Accenture

Jan 2017 - Sep 2018 (1 year 9 months)

I am working as a Machine Learning Developer at Accenture for multiple Research projects, and few of the research projects won awards and it has been considered as product by the company.

Work Experience on:

- 1) Machine Learning
- 2) Python
- 3) AngularJS

Projects:

- 1) Financial Service Development Project (Quartz Development) (Full Time, Managed team size of 2)
- 2) Self Learning Credit Approval System (Part time, 3 months)
- 3) AI Model Based Risk Management (Part time, 4 months)
- 4) Ship and Air Cargo Routing (Part time, 2 months)
- 5) Digital Content and Transaction Management using an Artificial Intelligence (AI) based Communication System (Part time, 3 months)
- 6) Routing System for Car Pool and Drop for the Employees (Part time, 3 months)



## **Founder**

PixRead

Dec 2016 - Sep 2018 (1 year 10 months)

One of a kind OCR & 2D Codes (QR Code, Bar Code etc) search engine where the extracted text will be searched over a search engine. This will ease all the users to take a picture (which has text) from a device and search over different search engines.

Anyone willing to contribute can contact me.



## **Bounty Hunter**

HackerOne

Jan 2017 - Aug 2018 (1 year 8 months)

Found and Resolved Bugs for:

- 1) Zomato



## **Technical Associate**

Institute of Engineering & Management, Kolkata

Aug 2015 - Dec 2015 (5 months)

SEO, Technical Troubleshooter, Web Development (Wordpress)

## **Education**



### **Indian Institute of Technology, Kharagpur**

Deep Learning (AICTE approved FDP course), Computer Science

2019 - 2019

Level: Postgraduate

Jul-Oct 2019 (12 Week course)

This is an AICTE approved FDP course



### **Institute of Engineering & Management, Kolkata**

Bachelor of Computer Application, Computer Science

2013 - 2016



**Delhi Public School, Ruby Park**

All India Senior School Certificate Examination, Computer Science

2003 - 2013

## Licenses & Certifications



**Google for Education Basics Exam** - Google



**Python for Data Science** - IBM



**Build Your Own Chatbot - Level 1** - IBM



**Data Science Foundations - Level 1** - IBM



**Applied Data Science with Python - Level 2** - IBM



**Machine Learning with Python** - IBM



**Deep Learning** - Indian Institute of Technology, Kharagpur

NPTEL19CS54S41212108

## Skills

Deep Learning • Machine Learning • Research • Artificial Intelligence • Algorithms • Data Analysis •  
Product Development • Financial Services • Credit Risk • Image Processing

## Honors & Awards



**Student Performance Award** - Institute of Engineering & Management, Kolkata



**Accenture Celebrates Excellence** - Accenture

May 2018

Category - Innovation

Award type - Individual



**Accenture Celebrates Excellence** - Accenture

Nov 2017

Category - Client and Customer

Award type - Team



**Accenture Celebrates Excellence** - Accenture

Aug 2018

Category - Innovation

Award type - Team



## **Runners-Up** - National Science Foundation (NSF) & Arizona State University (ASU)

Jul 2020

In this challenge, we use a drone to search for and locate a soil probe. The drone picks up the probe and takes it to a drop-off location. Then, the drone must autonomously return to a rover and land in its trunk. This was accomplished using Rtabmap, a SLAM package used to estimate the position and velocity states of the rover with visual odometry and our own tailor-made Kalman Filter conflated with GPS based state estimation and the visual odometry based states.