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OBJECTIVE

To work in an organization where culture of freedom and working for initiatives is ensured, facilitating my contribution through thoughts and action to the company's vision and thus achieve self-development by playing a significant role in building the organization.

SKILLS

- Machine Learning
- Deep Learning
- Data Science
- Optimization
- Image Processing
- Algorithm
- Architect
- Innovation
- Research & Development

EXPERIENCE

Senior Machine Learning Researcher at Pramati Technologies

Chennai, India

October 2018 – Present

I work in the Research & Development Labs for the company.

Research Works

- Global Optimisation using Genetic Algorithm

Machine Learning Researcher at Pramati Technologies

Chennai, India

October 2018 – September 2019

Research Works

- Deep Image Prior on MRI Medical scan
- Amazon SageMaker - Identifying the edge cases and how can it be fit for the company
- Fondue - A knowledge base construction engine for richly formatted data

Senior Data Scientist at Imaginea Technologies Inc.

Chennai, India

October 2019 – Present

Bain and Company (Client Project)

Computing Customer Lifetime Value (CLV) for their existing clients where explainability is a major part of the project

Data Scientist at Imaginea Technologies Inc.

Chennai, India

October 2018 – September 2019

RPX Corporation (Client Project)

Problem: Classifying highly imbalanced patent dataset and perform a probabilistic scoring whether it will be litigated or not.

Action: I learnt the domain for feature engineering to reduce the imbalance of the classes. Creating a probabilistic system to generate the score as per their required distribution. Validated the algorithm and checked for model bias.

Result: The model as accepted by the client and it is used in the production. This became one of the milestones for client.

Associate Software Engineer at Accenture

Chennai, India

January 2017 – September 2018

• Bank of America (Quartz Development) (Full Time, Managed team size of 2)

Problem: We had multiple tools of different technologies, and we require proficient resource to use the tools. Project was people driven.

Action: I made a platform for Environment Management team where all the automated scripts (for multiple technologies) & report generation tools will be placed & used from a single integrated platform with a simple UI.

Result: Saved a lot of manual effort, anybody with the access permission can use the tool can execute it using a simple UI with less or no knowledge of the technology, Project became Process driven.

• Self Learning Credit Approval System (Part time, 3 months)

Problem: Rule based decision for approval of Credit which lead to loss of business.

Action: I was solely responsible for the development of the Machine Learning Algorithm using H2o.ai, scikit-learn, Python.

Result: Accenture took this as a product and is demonstrated to the client for identifying bad loans / missed opportunities, enable the bank to mitigate potential risk and opportunities.

• AI Model Based Risk Management (Part time, 4 months)

Problem: High level of manual effort from Compliance officer for Risk Management to detect valid and type of alerts raised

Action: I made an AI based Model using DeepLearning to detect the Alert and type of alert which is performed by Compliance officer. (Azure, Python, H2o.ai)

Result: Dependency on the compliance officer will decrease, model will be capable to figure out new patterns in the generated alert.

• Ship and Air Cargo Routing (Part time, 2 months)

Problem: Ship and Air Cargo Routing for Logistics with high traffic and and more than expected loading time.

Action: Used key concepts of algorithm and process Design to optimize the whole system.

Result: Decreased the time for processing more than 20 seconds which improved the performance and saved huge money.

• Digital Content and Transaction Management using an Artificial Intelligence (AI) based Communication System (Part time, 3 months)

Problem: There were no existing intelligent model to predict Disputes of a transaction of a financial institute.

Action: I have designed a machine learning model which predicts both the dispute and the dispute category of a financial transaction given to the model using a life dataset.

Result: Accuracy of the model with the live dataset came to be around 92%. The project is applied for patent by Accenture and will be sold as a product to the clients. This offering is expected to Reduce Annual Billing Disputes Volume by ~30% i.e. ~330K, lowering Ops Cost by USD 15.3 million and enhancing Customer Experience by guarding them from such dispute prone transactions.

- **Routing System for Car Pool and Drop for the Employees (Part time, 3 months)**

Problem: Accenture uses semi automated algorithm for deciding the routed for office cab service. The final sorting was done manually from data sorted by area pin-code generated from the automated third party algorithm.

Action: Created an software using Google Map and some grouping algorithm with considering total cars, total no of seat in each car, last drop should be a male for women security.

Result: Reduced the entire manual effort form sorting and assigning of the cabs.

Bounty Hunter at HackerOne

(Part Time)

January 2017 – Present

Found and Resolved Bugs for:

1) Zomato

Creator at PixRead

(Research Project)

December 2016 – Present

An Innovative Research Project which helps the users to extract the text from an Image using OCR and other image processing algorithms and search through different Popular Search Engines. Technologies used - OpenCV, Google Tesseract OCR, etc..

Website Developer & SEO Professional at Saltlake Institute of Engineering & Management (SLIEM)

(Part Time)

August 2015 – February 2015

Develop and Update Organization Website using Wordpress.

SEO for Google of the Organization Website. Maintaining NSDC(India) Database

PUBLICATIONS

Digital Content and Transaction Management using an Artificial Intelligence (AI) based Communication System

United States Patent and Trademark Office (1st August 2018)

Patent Application No. :: D18-224/03655-PR-IN

Intellectual Property India

Patent Application No. :: 201811027773

Prime Numbers – 1st One Lac

Research Gate (*June 2016*)

Dataset :: 10.13140/rg.2.1.1875.1609

Grid Searching – Novel way of Searching 2D Array

International Journal of Computer Applications Technology and

Research (*January 2016*)

Research :: 10.7753/ijcatr0501.1005

Biometric Ticketing System

Intellectual Property India (*18th March 2014*)

Patent :: 335/KOL/2014

Data Security- Multi-Layer Folder Lock Hiding

Intellectual Property India (*30th April 2013*)

Patent :: 488/KOL/2013

Biometric Voting Machine

Intellectual Property India (*17th December 2014*)

Patent :: 1320/KOL/2014

AWARDS & CERTIFICATIONS

Indian Institute of Technology, Kharagpur

November 2019

Deep Learning :: Certification (Postgraduate)

This is an AICTE approved FDP course (Proctored Examination)

Accenture Celebrates Excellence

August 2018

- **August 2018** :: Category - Innovation (Team)
- **February 2018** :: Category - Innovation (Individual)
- **September 2017** :: Category - Client and Customer (Team)

Demonstration :: Indian Army -Bengal Area Sig Coy

November 2013

Data Security- Multi Layer Folder Lock Hiding

Accenture -Asset Harvest Contest

March 2018

1st Place.

Institute of Engineering & Management (Kolkata, India)

Bachelor of Computer Application (H) (B.C.A.) / Computer Application

July 2013 – July 2016

- **Handwriting Recognition using Histogram of Oriented Gradients (H.O.G.)**

Mar 2016 – Apr 2017

“Xtract” is a computer vision project which focuses on Handwritten Digit recognition using Histogram of Oriented Gradients. Histogram of Oriented Gradients is a feature descriptor which I have used to recognize the input image and save the data on a file.

- **16-Bit Operating System with Dedicated Interpreter (BASIC)**

Aug 2015 – Dec 2015

“RGJREX O.S.” is a 16-Bit Operating System with BASIC Interpreter. I have used Assembly Level Language 16-bit/win32 (NASM) to develop the above project. The above project uses the concept of Stack Data Structure as storage memory of my operating system

Saltlake Institute of Engineering & Management (SLIEM) (Kolkata, India)

Internship / C# .Net Certification

June 2015 – July 2015

- **Online Job Portal using C# .Net**

Customer Panel and Admin Panel for Managing jobs and applying for respective job profile

Delhi Public School, Ruby Park (Kolkata, India)

AISSCE (All India Senior School Certificate Examination) / Computer Science

*March 2012 – April 2013***Delhi Public School, Ruby Park** (Kolkata, India)

AISSE (All India Secondary School Examination) / General

March 2010 – April 2011