

GIRIDHARAN ANBARASAN

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[Portfolio](#)

[GitHub](#)

EDUCATION

NEW JERSEY INSTITUTE OF TECHNOLOGY

Master's in Data Science

Jan 2020 - Dec 2021

GPA - 3.62

ANNA UNIVERSITY, INDIA

Bachelor's in Information Technology

Aug 2013 - May 2017

GPA - 3.6

PROFESSIONAL EXPERIENCE

MILLIPORESIGMA, USA - DATA SCIENTIST CO-OP

Jun 2021 - Present

PREDICTIVE ANALYTICS USING HIERARCHICAL MODELING

Improved on-time delivery statistics for the testing studies from 81% to 95% using predictive analytics. And the resulting efficiency improvements equate to 1.18M Euros per year.

- Analyzed over 300K records of historical Biotesting studies data and the time taken to complete each process in the testing life cycle.
- Performed Data Wrangling and developed a hierarchical machine learning model to predict the expected duration for future studies to go through each stage in testing life cycle.
- Deployed the ML model in the application which has mechanisms to monitor the current state of each study in the queue, evaluate their on-time status, highlight studies that are at risk of being not on time and support prioritizing them.

CAMELOT LOTTERY SOLUTIONS, UK - MACHINE LEARNING INTERN

Jan 2021 - Feb 2021

RECOMMENDER SYSTEM USING IMAGE PROCESSING AND ANALYSIS

Developed a recommender system that recommends better games to display in lottery vending machine and planograms.

- Implemented Edge Detection, Template Matching, Multi-scale Template Matching, ORB, SURF and SIFT using OpenCV to detect and extract games from the images of lottery vending machine.
- Designed and implemented a points system that scores each game and planograms based on the geographical location, number of active players, profit for each game and planograms and the performance of other retailers in the locality.
- Recommended best performing games and planograms that increases the players engagement, reach new players and boost profit of the organization.

ZOHO CORPORATION, INDIA - BACKEND WEB DEVELOPER

May 2017 - Dec 2019

Java Developer and Modules Head at Zoho Desk, the first context-aware help desk software that helps businesses focus on the customer.

- **CHAT MODULE HEAD**
Implemented two-way integration between Zoho Desk and Zoho Chat; Implemented chat support that allows customers to use chat through chat widgets with zobot (chat bot) in their websites; Reduced the customer queries by 70% upon releasing versions and updates.
- **GAMIFICATION MODULE HEAD**
Designed and developed Gamification module that engages the agents with their customers by awarding points and badges based on their response time, number of threads to close an issue and escalation levels.
- **REAL-TIME UPDATES MODULE HEAD**
Integrated Zoho Desk with Zoho WMS (an internal Zoho messaging system); Designed a Manager Dashboard that shows list of online and offline users along with their open and closed tickets, customer ratings and other information.
- **AGENT COLLISION MODULE HEAD**
Developed Agent Collision module that prevents accidental collision by alerting agents, when accessing a ticket, with list of agents who are viewing, editing, or drafting the same ticket.

PROJECTS

- **ONLINE ORDERING SYSTEM**
Designed and developed an e-commerce website for a local business that lists products and allows users to place an order. Features include user account, wish list, cart, and online payment portal. Integrated MySQL and Hibernate with Java backend, developed front end with JavaScript, HTML and CSS and used Gradle to compile, build and host the project on GitHub.
- **PAGE-RANK ESTIMATOR MODEL**
Designed, implemented, and tested page-rank model of all nodes in a web graph using Directional Graphs in Java.
- **AWS DEEPRACER ON REINFORCEMENT LEARNING**
Trained an RL model on vehicle in a simulated environment, that can be transferred to the real world; model runs on AWS.
- **EMAIL SPAM FILTERING USING NATURAL LANGUAGE PROCESSING**
Developed Naïve Bayes classifier using sci-kit learn that can investigate 100s of E-Mails or SMS and detect spams with an accuracy of 99%.
- **FIGHTING CORONAVIRUS WITH AI AND DEEP LEARNING**
Developed Deep Learning algorithm using CNNs and Res-Net to classify COVID 19 using Chest X-Ray images with an accuracy of 95%.
- **TIME SERIES ANALYSIS OF SALES**
Developed a model using Facebook's Prophet to predict the product sales at any given period to facilitate inventory management.
- **ESTIMATION OF AIRPORT CHECK-IN FACILITIES**
Implemented a dedicated queue for first class and coach passengers and displayed the durations of the simulation, maximum length of the queues, average and maximum waiting time for each queue and rate of occupancy of each service station using Java and Data Structures.
- **TWITTER REAL-TIME STREAMING APPLICATION**
Implemented a mapping application that allows users to view a real time stream of Twitter hash tags using Node.js and D3.js.

SKILLS

- **PROGRAMMING SKILLS**
Java, Python, R, JSP, Angular, React, JS, Ajax, jQuery, SQL, HTML, C, C++
- **DATABASES:** MySQL, Oracle DB, MongoDB
- **INTEGRATED DEVELOPMENT ENVIRONMENT**
Eclipse, Visual Studio, PyCharm, Jupyter Notebook
- **TOOLS AND PLATFORMS**
Git, Palantir Foundry, MySQL Workbench, Postman, Docker
- **MACHINE LEARNING LIBRARIES AND TOOLS**
Python, Keras, PySpark, PyTorch, TensorFlow, OpenCV, Sci-kit learn, Pandas, Plotly, Dash, Matplotlib, Seaborn, MATLAB, AWS, Tableau

CERTIFICATION

Google TensorFlow Developer Certificate

May 2021 - May 2024