GIRIDHARAN ANBARASAN

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EDUCATION

NEW JERSEY INSTITUTE OF TECHNOLOGY   Jan 2020 - Dec 2021
Master's in Data Science   GPA - 3.6

ANNA UNIVERSITY, INDIA   Aug 2013 - May 2017
Bachelor's in Information Technology   GPA - 3.6

PROFESSIONAL EXPERIENCE

CAMELOT LOTTERY SOLUTIONS, UK - MACHINE LEARNING INTERN   Jul 2020 - Sep 2020
Machine Learning Engineer Intern at Camelot Lottery Solutions, the leading solutions and technology provider to lotteries around the world.

- **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 DEVELOPER   Jan 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

- **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 that can investigate 100s of E-Mails or SMS and detect spams with an accuracy of 97%.
- **FIGHTING CORONAVIRUS WITH AI AND DEEP LEARNING**
  Developed Deep Learning algorithm to classify COVID 19 using Chest X-Ray images using CNNs and Res-Net with an accuracy of 95%.
- **TRAFFIC SIGN CLASSIFICATION USING LE-NET DEEP NETWORK**
  Developed Deep Neural Network to classify 43 different classes of Traffic Signs images using Le-net with an accuracy of 98%.
- **TIME SERIES ANALYSIS OF SALES**
  Developed a model to predict the product sales at any given period to facilitate inventory management using Facebook's Prophet.
- **ANALYZING YELP REVIEWS USING NATURAL LANGUAGE PROCESSING**
  Developed NLP strategies such as remove punctuation, remove stop words, implement count vectorizer to analyze yelp reviews.
- **PORTFOLIO MANAGER USING R**
  Developed Portfolio Manager to select the best Vanguard ETFs based on risks, returns, duration by analyzing data using R.
- **DIABETES PREDICTION USING K NEAREST NEIGHBOR**
  Developed a classifier model to predict diabetes in patients using PIMA diabetes dataset using KNN with an accuracy of 98%.

SKILLS

- **PROGRAMMING SKILLS**
  Java, Python, R, JSP, JS, Ajax, jQuery, SQL, HTML, C, C++
- **MACHINE LEARNING TECHNICAL SKILLS**
  Time Series Analysis, Natural Language Processing, Image Processing, Reinforcement Learning, Deep Learning, Supervised and Unsupervised Learning, Ensemble Methods, Data Analytics
- **MACHINE LEARNING LIBRARIES AND TOOLS**
  Python, Keras, PyTorch, TensorFlow, OpenCV, Sci-kit learn, Pandas, MATLAB, AWS. Tableau
- **DATA ANALYSIS AND VISUALIZATION**
  Plotly, Dash, Matplotlib, Seaborn, Tableau, R