ARUNN THEVAPALAN

Machine Learning Engineer | Data Scientist

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TECHNICAL SKILLS:

- Programming: Python, Java, R
- Database: MySQL, Gremlin
- Cloud: Google Cloud, Microsoft Azure, AWS
- Devops: Docker, Kubernetes
- Web Development: HTML, CSS, JavaScript
- Machine Learning: PyTorch, TensorFlow

WORK EXPERIENCE

Machine Learning Engineer at TRABEYA PVT LTD
September 2018 - Present

- REAL-TIME BIO-MASS ESTIMATION USING COMPUTER VISION
  Built a prototype using detection and instance segmentation of fishes, integrated with depth estimation to estimate the bio-mass of the fishes in real-time.
- RESIDENT SEGMENTATION DASHBOARD
  Built a data pipeline to extract data from Data Warehouse and create a dynamic knowledge graph that derives insights and then segments the residents using clustering algorithms.
- PRIVACY PRESERVING SYNTHETIC DATA ENGINE
  Built an Generative Neural Network incorporating Differential Privacy using PyTorch to generate synthetic tabular data that holds statistical properties of the original tabular data.
- MARBLE SCORE PREDICTION ENGINE
  Built an Engine that predicts the marble score of Beef in advance of killing using past data collected of the living cows to be used for sales and marketing of the product.
- GENOMIC DATA PIPELINE
  Built and maintained a robust pipeline to process enormous genomic datasets and extract information from them in human readable format.

Software Product Sprint Developer at GOOGLE LLC
May 2019 - August 2019

Software Product Sprint (former CodeU) is an invite-only 12 week program organized by Google concluding at Google APAC HQ, Singapore. Built a Social Media Platform similar to Instagram/Facebook with Machine Learning capabilities such as Sentiment Analysis, Automatic generation of hashtags for images and Text to Speech Generation for text-posts.
Technologies used were Google App Engine Framework, Java, Javascript, HTML & CSS.

Data Analytics Intern at INDIAN INSTITUTE OF MANAGEMENT LUCKNOW
July 2017 - August 2017

Worked on analyzing different data sets and to derive meaningful insights for decision making. Project work includes an analysis and development of a predictive model based on past data sets on the domain of Hotel Room Pricing Strategies in the Indian Market.
Technologies used were R, RMarkdown.

Software Development Intern at COMMERCIAL BANK OF CEYLON PLC
May 2017 - August 2017

Worked in the area of Research & Development which primarily included assisting the team in Development using .NET framework along with Software Testing and Assurance of developed systems.
Technologies and tools used were C#, Bugzilla and SonarQube.

EDUCATION

Master of Business Administration (2019-2020)

UNIVERSITY OF WEST LONDON

- Masters Thesis: Organizational Adaptation towards Artificial Intelligence in Sri Lanka
- Modules: Business Intelligence, Strategy & Entrepreneurship, Accounting for Decision Makers, New Venture Development, Business Ethics, Managing People, Global Marketing & Digital Businesses, Research Methods

Computer Vision Nanodegree (2019-2020)

UDACITY

- Graduation Projects:
  - Facial Keypoints Detection
    Used image processing techniques and deep learning techniques to detect faces in an image and find facial keypoints, such as the position of the eyes, nose, and mouth on a face.
  - Automatic Image Captioning
    Combined CNN and RNN is PyTorch to build a deep learning model that produces captions given an input image.
  - Landmark Detection and Localization
    Used feature detection and keypoint descriptors to build a map of the environment with SLAM (simultaneous localization and mapping).

B.Tech in Computer Science & Engineering (2014-2018)

NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR, INDIA

- CGPA 8.80/10
- Undergraduate Thesis:
  - Application Independent Testing for FPGA Interconnects
    Formulation of a new algorithm for minimizing the configurations needed to carry out the testing and verification of VLSI Circuits. Constraints were defined using Z3Py and solved using Z3 SMT-solver to obtain the optimal test configuration set.
    Technologies: Z3Py , Z3Py SMT Solver.
  - Data Clustering in Hanan Grids
    Formulation of new clustering algorithm using SAT based methodology. Defining constraints to generate PB-SAT formulation using C++ and solved the constraints using minisat+ solver to obtain the optimal cluster solution.
    Technologies: C++ , Minisat+ Solver

RELEVANT CERTIFICATIONS

- Deep Learning Specialization by deeplearning.ai (Coursera)
- Advanced Machine Learning with TensorFlow on Google Cloud Platform Specialization (Coursera)
- Data Engineering Specialization on Google Cloud Platform (Coursera)
- Statistics with Python Specialization (Coursera)
- Secure and Private AI Scholarship (Udacity)
- Software Engineering for Data Scientists (Datacamp)

POSITIONS OF RESPONSIBILITY

- Senior Prefect of Royal College, Colombo 2013/14
- Secretary of Hindu Students' Union, Royal College 2012
- Treasurer and Speaker of Gavel Club, Royal College 2012
- Treasurer and Member of Scrabble Club, Royal College 2012
- Member of General Knowledge Team, Royal College (2011-2013)
- Head of Entrepreneurship Cell, NIT Durgapur (2017/18)
- Senior Fest Coordinator of AAROHAN 2018 (Second Largest Fest in East-India)
- Senior Executive Member of Centre for Cognitive Activities (Technical Club), NIT Durgapur