ARUNN THEVAPALAN

Machine Learning Engineer | Data Scientist

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TECHNICAL SKILLS:

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

WORK EXPERIENCE

Machine Learning Engineer at TRABEYA   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.

Machine Learning Engineer at OMDENA   May 2020 - Present

The project worked revolves around Data mining and analysis regarding an increase in online harassment and domestic violence in the time of COVID19. The goal is to use the solution built to subsequently help victims of domestic violence and online harrasment.

Mentor at OPENMINED   May 2020 - Present

OpenMined is an open-source organization that works on making the world more privacy-preserving by lowering the barrier-to-entry to private AI technologies. I mentor developers & students who are new to the community to get started with these AI technologies.

Software Product Sprint Developer at GOOGLE   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

Project work includes an analysis hotels.com datasets and development of a predictive model based on past trends on the domain of Hotel Room Pricing Strategies in the Indian Market using R.

Software Development Intern at COMMERCIAL BANK OF CEYLON   May 2017 - July 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
  - Conducted a quantitative research, collected data from decision makers from large scale organizations in Sri Lanka and analyzed and conducted hypothesis tests using SPSS and proposed a conceptual framework and a model that explains the variation (R-squared value) up-to to 63.7% on the factors that influence how organisation adopts towards AI.

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 Scientist Nanodegree (2020)
UDACITY

- Graduation Projects:
  - Recommendation Engine for IBM- With an analysis of the user interactions on IBM Watson Studio platform, making recommendations to users on articles using Matrix Factorization, Collaborative Filtering and Content based Recommendations.
  - Starbucks Promotions Optimization Strategy - Conducted Experimental Design and Analysis, built predictive models leveraging the results and Proposed an optimal promotional strategy which can yield positive results for Starbucks.

Computer Vision Nanodegree (2019-2020)
UDACITY

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

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