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# Dhanabalan Mahalingam

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## DATA SCIENCE & ANALYSIS

*"Delivering impactful outcomes by transforming requirements into scalable models and innovative solutions."*

**Analytical and results-oriented ML Engineer** with over 15+ years of leadership experience, exemplifying skills in scalable analytical modeling, algorithm design, and data mining solutions, and delivering a proven track record of transforming requirements into actionable insights and driving effective decision-making. Well-versed in developing data-driven solutions to streamline critical business processes in a fast-paced environment.

### Key Professional Strength & Value Offered:

- ☑ Capitalize on an in-depth understanding of analytics and statistics to load and analyze a wide range of data sources and deliver meaningful insights on the customization of plans and implementation of data-driven solutions.
- ☑ Proven capacity for working with teams in discussing specifications/requirements, analyzing datasets to extract insight, and formulating techniques to improve infrastructure, optimize processes, and refine business outcomes.

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## CORE COMPETENCIES

Data Analysis & Statistical Modelling | Machine Learning Techniques & Algorithms | Problem Solving & Critical Thinking  
Business Intelligence | Data Management, Cleansing, and Transformation | Data Visualization & Storytelling | Text Analysis  
Predictive Modeling & Forecasting | Customer Segmentation | Anomaly Detection | Image Processing | Research &  
Development (R&D) Attention to Detail | Project Execution | Communication & Presentation | Training & Coaching |  
Continuous Improvement

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## PROFESSIONAL EXPERIENCE

### ML ENGINEER

#### ALLIANZ

Stamford, CT

September 2020 - Present

*Gained extensive experience working with clients and insurance domains, including renowned clients such as GenRe, AXA, and Allianz.*

- Collaborate and offer strategic direction & insights to businesses by conducting in-depth analysis, refining troubleshooting strategies, and collaborating with teams to discuss status reports and implement corrective actions for business issues.
- Revolutionize operations through the creation and implementation of advanced algorithms, analyzing sentiment data, detecting trends, and optimizing insurance structures for enhanced risk assessment and claims management.
- Leverage data analysis and statistical methods to identify patterns within datasets and enable informed decision-making.
- Serve as the expert in analyzing data and results and administering to support the delivery of optimum performance.
- Developed Image Classifications/Segmentation/Object Detection on Pytorch, Torch Vision and Vision Transformers.
- Expertise in MLOPS (Pipeline creation, Containerizing the Model, Deployment and Monitoring).

### *Key Contributions:*

- ✓ Engineered advanced anomaly detection algorithm, which achieved a +87% accuracy in identifying outliers within data.
- ✓ Fostered effective collaboration to identify & address data-related issues and achieve a +30% enhancement in data accuracy.
- ✓ Spearheaded the automation of underwriters' tasks related to policy decisions, leading to annual cost savings of \$200K+.

### DATA SCIENCE PLATFORM CONSULTANT

#### AXA

Stamford, CT

January 2016 - August 2020

*Provided support for various Data Science platforms, including Posit Workbench, Connect, Package Manager, Anaconda, and ETL pipelines.*

- Guaranteed smooth operations and reliable performance by keenly monitoring production model support and deployment.
- Employed leadership skills and well-honed data analytics acumen in organizing large data sets, generating detailed statistics on model performance, and offering valuable suggestions to enhance platform stability and optimize model performance.
- Empowered users to leverage advanced data insights by deploying user-developed dashboards & machine-learning models.

- Exemplified strong data analytics background and profound understanding of analytical tools and the industry in driving business process optimization decisions and developing and executing enhanced processes.

**Key Contribution:**

- ✓ Saved the company \$1M+ in licensing costs and facilitated the recovery of user licenses by creating a Shiny Dashboard that effectively monitored and tracked application usage and performance statistics.

**SENIOR PROGRAMMER APPLICATION SUPPORT**

Stamford, CT

**GenRe**

June 2011 - December 2015

- Ensured business and operations continuity through comprehensive software application and disaster recovery testing, seamlessly transitioning critical systems into high-availability environments, and minimizing disruptions.
- Led the delivery of optimum work performance by collaborating closely with experts, developers, analysts, and project managers to perform data analysis, identify errors, track productivity, formulate strategies, and troubleshoot inconsistencies.
- Implemented strategic vision in recommending data-driven sales solutions and identifying opportunities to support growth.

**DEVELOPER**

Chennai, India

**CSS Corp**

March 2008 - May 2011

- Operated full range of responsibilities in directing project execution phases of varying complexity, including analyzing technical specifications, testing programs and databases for modification, and designing methodical plans for completion.
- Operated a wide range of systems and software applications to achieve established goals and meet deadlines.
- Contributed to designing, developing, and implementing website software applications, ensuring adherence to analyzed technical/business requirements, industry technical standards, and operational goals.

**EDUCATION****BACHELOR OF ENGINEERING - Electronics and Instrumentation Engineering** | Anna University, India**LICENSE & CERTIFICATION****Microsoft Certified | Azure Data Scientist Association****August 2019****PRINCE2 2017 Practitioner | PeopleCert****September 2019 - September 2024****DataCamp: Machine Learning Scientist****February 2023****WQU - Applied Data Science Lab****July 2023****TECHNICAL SKILLS**

Programming Languages (Python, R) | SQL & Database Querying | Mongo DB | Deep Learning (Pytorch, Keras, Tensorflow,) | Computer Vision (FCNN, RESNET18, VGG, Detectron2, Vision Transformers) | NLP (LSTM, RNN, BERT, LLM) | Data Visualization Tools (Tableau) | AWS (EC2, S3, Lambda, SageMaker, Boto3, Cloud Formation) | GCP (Vertex AI) | Databricks | Statistical Methods (K-means clustering, Regression, Decision Trees, Random Forests, Linear Regression, Logistic Regression, Support Vector Machines (SVM), K-Nearest Neighbors (KNN), Clustering, Principal Component Analysis (PCA) | Posit product Management (Installation and upgrade) | Shiny App Development | PySpark | Docker | Kubernetes | Kubeflow | Ray | DVC | Pachyderm | FLASK | CICD(AWS Code Deploy, Github Action, Cloud Formation) | Cron Jobs | RHEL 7.x, 8.x | TFS.