JAYA KHAN

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EDUCATION

DUKE UNIVERSITY   **Durham, NC**
Master of Science; Major in Interdisciplinary Data Science   **2021-2023**

DR APJ KALAM TECHNICAL UNIVERSITY   **Lucknow, India**
Bachelor of Technology; Major in Electronics and Communication Engineering   **2007-2011**

EXPERIENCE

DUKE HEALTH CLINIC   **Durham, NC**
Research Scientist   **August' 2022 – Present**

- Assessing the impact of Covid19 on lupus patients; developed a regression model to comprehend the roles of geographic and demographic factors that may have caused or added stress during the pandemic.
- Devised strategies for handling missing values in survey data; leveraged KNN algorithm to impute missing values for observations with lowest Euclidean distance to other observations.

AMERIPRISE FINANCIAL   **Minneapolis, MN**
Data Science Intern   **May'2022 – August' 2022**

- Built unsupervised machine learning model to identify best-practice wholesalers, using best practices to guide low performing wholesalers with a projected twofold increase in their annual sales contribution.
- Proposed and streamlined relationship metrics to segment business territories based on how deep and long is the relationship between wholesalers and financial advisors; metrics that are in lined to help the firm with future sales goal planning strategy.

ADOBE   **Bengaluru, India**
Digital Strategy Analyst   **2020-2021**

- Secured $4.1MM contract with a retail giant by helping them discover pages with high bounce rate throughout the product checkout journey, creating a lift of 16% on their purchase to visit conversion rate.
- Helped Adobe strengthen its market presence by auditing technologies used across industry verticals, identifying highest cross-selling opportunities, and thereby increasing Annual Recurring Revenue by 15%.

Solution Audit Analyst   **2017-2020**

- Streamlined new offering on Adobe Analytics to help clients prioritize mobile app performance metrics, improving clients' engagement score with the product by 7% (target annual improvement: 5%).
- Aided Adobe close $1.1 MM deal with a manufacturing client by addressing data-silos within client's enterprise ecosystem; identified the gap through cross-functional team interviews and data deep-dives on the company's enterprise architecture.

DELOITTE DIGITAL   **Bengaluru, India**
Technology Consultant   **2015-2017**

- Predicted the likelihood of shopping cart abandonments by estimating customers' propensity score through random forest, enabling a retail giant offer real-time promotions and boosting its online sales by 23%.
- Developed web application to target customers of a Fortune 500 pharmaceutical client with personalized promotional content using cosine similarity measure, improving content's click-through rate by 35%.
- Implemented single sign-on user-authentication module (SAML) for a multi-level marketing client, removing the need for multiple logins during a session and reducing corresponding administrative burden.

WIPRO LIMITED   **Bengaluru, India**
Java Developer   **2012-2015**

- Owned and developed solutions for automating complete web analytics tracking for one of the biggest banking clients, eliminating future web tracking development time by 25%.
- Designed XML processing API in Java programming language for a financial services client to improve the speed and accuracy of messages delivered, helping client reduce average latency by 38%.

- Created logging monitoring module for an oil & gas client using Java APIs for logging and querying database, reducing their website's downtime by 60%.

EXPERTISE

- **Programming Language:** C, C++, Python, R, Java, JavaScript, jQuery, HTML, SQL, XML, JSON.
- **Data Analysis/APIs:** Regression, Causal Inference, Clustering, Cohort, Time Series, Random Forest, bi-LSTM, BERT, LGBM, Stacking, Gradient Boosting, Gaussian Mixture, Neural Networks, Markov Text Generator, Hidden Markov Model, Viterbi, Semantic Vectors, Latent Dirichlet allocation Model, TensorFlow, PyTorch.
- **Cloud Solutions:** Adobe Experience Cloud (AEM, Data Management Platform, Data Lake, Target, Campaign), Kafka pipeline, Google Cloud Platform (Colab, BigQuery, Kubernetes, Pub/Sub), Jupyter, Tableau, AWS Sagemaker.
- **IDEs/CI/CD:** Visual Studio Code, EMACS, Eclipse, Docker, Jenkins, GitHub, GitHub Actions, GitLab
- **Frameworks/Services**: Java Content Repository, OSGI models, Microservices, Flask, REST, SAML/oAuth authorization and authentication, MapReduce, DAME-FLAME.
- **Automation:** Kofax Robotic Process Automation, Clay Tablet, Excel VBA.

ACADEMIA PROJECTS

CAUSAL INFERENCE: Identify the impact of *super host* label on the revenue generation of Airbnb.
- Leveraged DAME-FLAME python library to create treatment (super hosts) and control (regular hosts) groups on an observational data of Airbnb.
- Ran regression on matched dataset provided by DAME-FLAME, with an average difference of $3,127 in revenue generation between treatment and control groups.

BRAIN TUMOUR SEGMENTATION: Leveraged computer vision algorithms to detect and segment a specific type of brain tumour – glioblastoma multiforme (GBM), helping healthcare bridge the gap between radiology and neurosurgery.
- Trained three U-nets with different loss functions – cross entropy, dice, weighted dice – to segment the healthy brain tissue and affected brain tissue on clinical 3D MRI data.
- This project was a success in segmenting glioblastoma multiforme from clinical MRI scans with a dice similarity score of up to 80.5%.

AWARDS AND RECOGINITION

- **Ameriprise Financial:** Received award for leading the summer interns' presentation and spearheading leadership introduction.
- **Ameriprise Financial:** Recognized for successfully delivering the project in a demanding time constraint.
- **United Nations:** Received honourable mention in Hackmakers Hackathon 2021 for addressing Quality Education Goal (#4.4) of United Nations; conceptualized an interactive UI on a research platform to democratize access to research content.
- **Certifications:** AEM 6.0 Developer, Adobe Experience Platform, and Adobe Analytics Architect exam.

ADDITIONAL INFORMATION

- **Technovation:** Coached young girls to build a mobile app called 'Upcyclx'; app that was created to drive awareness on ways to upcycle plastic and that later received accolades from leaders focused on sustainability globally.
- **Adobe Support:** Led automation efforts within the team at Adobe by working with process owners to identify and automate repetitive tasks using Excel macros, bringing in an addition time efficiency of 1.5 hours per week.
- **Deloitte Support:** Overhauled training programs on introduction to Adobe Experience Cloud, programs routinely delivered to 38 employees annually; consistently received 5/5 facilitator rating (other sessions averaged between 3 and 4).
- **Interests:** Running | Meditation (Vipassana) | Travelling and collecting souvenirs | Reading