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**
Graduate Research Scientist   **August'22-Present**

- Boosted COVID-19 vaccine access by 48% for at-risk lupus patients through regression analysis.
- Implemented Bayesian imputation on COVID-19 survey data with MCMC and Gibbs sampler, achieving highest AUC of 0.703 in regression model.

AMERIPRISE FINANCIAL   **Minneapolis, MN**
Data Science Intern   **May'22-Aug'22**

- Doubled annual sales contribution of low-performing wholesalers by developing gaussian mixture model for profitable wholesalers' segmentation.
- Proposed relationship based KPIs to streamline sales strategies across territories, based on relationship strength between wholesalers and advisors.

ADOBE   **Bengaluru, India**
Digital Strategy Analyst   **2017-2021**

- Contributed to $4.1M contract with a retail giant by identifying high-bounce pages during checkout journey, boosting purchase-to-visit conversion rate by 16%.
- Optimized Adobe Analytics offering by prioritizing mobile app performance metrics, boosting client engagement score by 7% (surpassing the 5% target).
- Assisted Adobe in securing $1.1 MM deal with manufacturing client by resolving data-silos in enterprise architecture via data deep-dives and cross-functional team interviews.
- Elevated Adobe's market influence by analyzing industry tech, pinpointing top cross-selling prospects, and boosting ARR by 15%.

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

- Used random forest to predict shopping cart abandonments, enabling real-time promotions and increasing online sales by 23% for a retail giant.
- Improved click-through rate by 35% for a Fortune 500 pharmaceutical client by using a cosine similarity measure to tailor the web application's promotional content.
- Implemented SAML single sign-on user-authentication module for multi-level marketing client, reducing administrative burden by removing need for multiple logins.

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

- Automated web analytics tracking for a top banking client, reducing future development time by 25%.
- Improved message delivery speed and accuracy for financial services client by ~38% through designing Java-based XML processing API.
- Reduced website downtime by ~60% for an oil & gas client by creating a logging monitoring module using Java APIs.

———————————————— **EXPERTISE** ————————————————

- **Programming Language:** C++, Python, Rust, R, Java, JavaScript, SQL, Excel VBA.

- **Development Environment:** Visual Studio Code, EMACS, Eclipse.

- **Data Analysis:** Random Forest, LSTM, BERT, LGBM, Stacking, Gradient Boosting, Gaussian Mixture, Neural Networks, Markov Text Generator, Hidden Markov Model, Viterbi, Semantic Vectors, Latent Dirichlet allocation, Missing Data Imputation.

- **Cloud Service:** Adobe Experience Cloud, Google Cloud Platform, Amazon Web Services.

- **CI/CD:** Docker, Jenkins, Git, Microservices, Kubernetes.

- **Data Storage**: Java Content Repository, MySQL, AWS, Postgres, Oracle, Databricks.

———————————————— **ACADEMIC PROJECTS** ————————————————

CAUSAL INFERENCE: Developed and scaled an impact analysis framework for Airbnb's s*uper host* label, enabling its adoption by other hospitality companies.

- Leveraged DAME-FLAME Python library to create treatment (super hosts) and control (regular hosts) groups on Airbnb observational data.

- Conducted regression analysis on matched dataset generated by DAME-FLAME, showing $3,127 higher revenue generation on average for super hosts compared to regular hosts.

IMAGE SEGMENTATION: Utilized computer vision algorithms to accurately detect and segment *glioblastoma multiforme* (GBM) brain tumours, providing reinforcement to radiologist's diagnosis.

- Trained three U-nets and autoencoder with cross entropy, dice, and weighted dice loss functions to segment healthy and affected brain tissues on 3D MRI data.

- Successfully segmented glioblastoma multiforme from clinical MRI scans with up to 80.5% dice similarity score.

———————————————— **AWARDS AND RECOGNITION** ————————————————

- **Ameriprise Financial:** Acknowledged for introducing a guest speaker and facilitating the summer interns' presentation across the organization.

- **Ameriprise Financial:** Honored with recognition for completing a challenging intern project within a tight deadline, demonstrating strong project management and execution skills.

- **United Nations:** Honorable mention in Hackmakers Hackathon 2021 for interactive UI concept that democratizes research content access to achieve UN's Quality Education Goal (#4.4).

———————————————— **ADDITIONAL INFORMATION** ————————————————

- **Technovation:** Coached young girls to develop *Upcyclx*, a mobile app that promotes plastic upcycling and received global recognition for sustainability.

- **Adobe Support:** Spearheaded automation initiatives at Adobe, collaborating with process owners to identify and streamline repetitive tasks using Excel macros, achieving a time savings of 4.5 hours per week.

- **Deloitte Support:** Revamped Adobe Experience Cloud training programs for 38 employees annually resulting in 5/5 facilitator rating (compared to 3-4 in other sessions).

- **Interests:** Running | Writing | Travelling and collecting souvenirs | Reading