**MANAGER FORM – H1B CAP**

**(Required education & training should pertain specifically to the position)**

Applicant’s **FULL** Name: \_ARUN SINHMAR\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Complete Job Title: \_\_\_\_\_Specialist, Quantitative Sciences\_\_\_\_\_\_\_\_\_\_

Annual Salary (indicate currency): \_\_\_\_\_Base: $100,000 USD Eligible AIP: 8%\_\_\_\_\_\_

**Complete** Worksite **Street** Address:\_\_\_\_\_\_\_351 North Sumneytown Pike, North Wales, PA 19454.

Will the candidate work at any other Merck site? If yes, indicate site: \_\_\_\_\_NO

HR Business Partner Name (**not Staffing Consultant**): \_\_\_\_\_Nancy Demetrius\_\_\_\_\_

Immediate Supervisor name **and** job title: \_\_\_\_Senthil K. Murugan, Director, Quantitative Sciences\_\_\_\_

**Complete** Department Name **and** Division: \_\_US Market Analytics and Investment Optimization, US Strategy and Commercial Operations, Global Human Health

**(NO DEPT. NAME ACRONYMS)**

Department Cost Center # for UPS Shipping charges (required): \_\_\_\_\_\_\_\_10001959\_\_\_\_\_\_\_\_\_\_\_

Education Requirements & Major Field of Study for the Merck position: \_

**Master of Science (MS)** in Management Science, Business Analytics, Statistics or closely related field

***OR***

**Bachelor of Science (BS)** in Management Science, Business Analytics, Statistics or closely related field **with THREE years of experience**.

Background, Training, and Years of Experience Required for the Merck position: \_\_\_

**Required Experience and Skills:**

* The candidate must have a minimum of ***MS OR BS with three years of experience*** in developing and applying analytics solutions and client communications to solve business challenges related to health cate industry
* Working knowledge of SAS, R and Excel are required.
* Understanding of the Health Care or Pharmaceutical industry and experience in using various 3rd party data sources, such as IMS Exponent and/or Longitudinal Patient Level Data are necessary.
* The candidate must also have demonstrated strong client and project management experience, having to manage multiple analytical projects simultaneously and foster collaboration with colleagues.
* The candidate must have experience managing cross-functional teams and/or outside service providers to successfully deliver on analyses with multiple contributors and stakeholders.
* Superior communication and leadership skills are critical in order to develop, propose and convey technical concepts to business customers. Candidate must have demonstrated skills in developing concise and decision driven presentations that will inform decisions made by Senior Leaders.

**Preferred Experience and Skills:**

* **Two** years of relevant work experience in commercial analytics within pharmaceutical industry or candidate with a PhD in relevant quantitative field.
* Experience in analyzing Consumer Digital marketing promotions.
* Experience with Python, SQL and various analytical and data mining tools.
* Experience in applying advanced statistical methods, machine learning, linear and non-linear optimization techniques to address business questions.
* Experience in developing and applying metrics related to health care consumer’s medication affordability, adherence and abandonment using longitudinal patient level data.
* Experience with one or more of the following advanced techniques are also desirable: Bayesian data analysis, longitudinal analysis of time series cross sectional data, repeated measures modeling, Hierarchical Linear Modeling, data mining techniques, temporal sequence mining, Neural Networks, Deep Learning, Classification and Regression Trees (CART) and/or Discrete Choice Models.

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**DETAILED Job Description - must include at least 7 daily job duties and percentage of time for each duty.**

**(Do not use ACRONYMS unless spelled out.)**

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| --- | --- |
| **Job Responsibility** | **%** **Time** |
| Autonomously develop all phases of project planning and execution of those projects.   * Take end to end responsibility for collaborating with the marketing team to define business issues, collecting relevant pharmaceutical data, applying different predictive and machine learning models, and finally presenting the results to brand teams and commercial leadership * Utilize Agile methodologies for managing complex projects requiring co-ordination from multiple stakeholders viz. marketing, field, analytics, third party vendors   Communicate effectively with cross-functional teams and internal clients such as marketing brand leaders, center of excellence teams, senior management etc., to stay abreast of business trends   * Work with the product owners to understand brand strategy and accordingly align recommended actions from data analysis * Pro-actively develop analytical capability for addressing newer marketing challenges for e.g. promotion in a new therapeutic area | 20% |
| Analyze competitive market strategies through evaluation of relevant pharmaceutical markets, products and market shares.   * Apply leading predictive and machine learning solutions viz. omnichannel engagement, chatbot analytics, voucher programs to boost customer and patient engagement and subsequently market share for Merck’s products * Apply advanced methods for longitudinal data analysis (e.g. pathway analysis) to accurately calculate the promotion impact of digital channels (social, online video, display, paid search)   Collect, synthesize and analyze various pharmaceutical and business intelligence data sources and recommend analytically driven optimal HCP and HCC channel budgets.   * Integrate and manipulate multiple data sources - IMS physician/account sales, patient level claims, and promotion data as an input to statistical and machine learning models * Apply regression models to estimate the promotion impact of each marketing channel and run non-linear optimization to recommend the most optimal budget allocation | 20% |
| Generate standard or custom reports and presentations summarizing business and financial data for review by executives, managers, clients, and other stakeholders.   * Create annual historical performance and recommended budget allocation report by business unit, product, and marketing sub-channel for review by leadership * Create presentations summarizing results and action items from statistical and predictive analysis using Spotfire and PowerPoint | 15% |
| Build and analyze behavioral segments, Promotional Response models, Return on Investments, impact assessment for physician and patient-directed promotional programs and Marketing Mix models, Optimal promotional sequences to determine business  impacts of various Health Care Provider (HCP) and Health Care Consumer (HCC) promotions. | 20% |
| Design and build software tools to streamline statistical and operations research based advanced analytical methods. | 10% |
| Analyze industry and technology trends to identify target markets for launch products or to improve sales of existing products   * Utilize newer artificial intelligence (AI) based methods like Omnichannel marketing, geo-based targeting to increase customer and patient engagement with product promotions across therapeutic areas (diabetes, women’s health, oncology, specialty)   Research and apply emerging analytical methods and tools such as Machine Learning, Deep Learning, Advanced Statistical methods, Cloud Computing in Amazon Web Server (AWS), Python, R etc., to measure promotional impacts and optimal budget allocations. | 15% |

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Will employee supervise any employees? \_\_\_\_NO\_\_\_\_\_\_\_\_\_ If yes, how many? \_ N/A\_\_\_\_\_\_\_\_

Will employee have any budgetary responsibility? $\_\_\_\_N/A\_\_\_\_\_\_\_\_\_\_\_

**What Specialized Knowledge does the position require?** \_\_\_\_\_

**Two** years of relevant work experience in commercial analytics within pharmaceutical industry Experience in analyzing Consumer Digital marketing promotions. Experience with Python, SQL and various analytical and data mining tools. Experience in applying advanced statistical methods, machine learning, linear and non-linear optimization techniques to address business questions. Experience in developing and applying metrics related to health care consumer’s medication affordability, adherence and abandonment using longitudinal patient level data.

**Specify** **how** the candidate’s field of study specifically relates to the position offered: \_\_\_\_

The candidate has completed M.S. in Statistics with Data Science concentration from Rutgers University. The courses completed like Probability and Statistical Inference for Data Science, Regression and Time Series Analysis for Data Science, Data Wrangling and Husbandry, Data Structures and Algorithms, Database, Statistical Models and Computing, Financial Data Mining and Machine Learning Methods, Statistical Learning for Data Science and Advanced Analytics using Statistical Software are directly relevant to executing promotional response analysis, Market Mix analysis, Return on Investment analysis and other job duties listed above.

**Describe relevance** of applicant’s past experience to offered position:\_

The candidate has worked at ZS Associates for about **four years** and about **eight months** at Novartis Pharmaceuticals. During this time the candidate has worked with other pharmaceutical manufacturers and in hardware and/or software platforms that are relevant to execute her current job duties. Specifically, the candidate has a great amount of pharmaceutical sales and marketing client management experience and has worked on projects similar to the current role. As part of his past roles, the candidate has gained expertise in deeper understanding of various pharmaceutical datasets such as IMS Exponent and Longitudinal Patient level data and technologies like R, Python, SAS and SQL that are highly relevant to function effectively in the current role.

Please complete ENTIRELY to avoid delays.