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| EXPERIENCECyient Insights, India — *Data Scientist & SME*January 2015 - PRESENT ([www.cyient-insights.com](http://www.cyient-insights.com) / [www.cyient.com](http://www.cyient.com)) Working as a data scientist and subject matter expert, I was part of teams who completed two full projects (Philips, Netherlands and Rio Tinto, Australia) and another two (Siemens, USA and Southern California Edison) are under progress. We are using open source technologies and software for analytical solutions to support engineering & IT services at Cyient to its various global 500 businesses such as Boeing, Airbus, Pratt & Whitney, Rio Tinto, Siemens, Philips, Bombardier, British Telecom and more belonging to Aerospace & Defense, Consumer & Medical, Energy & Natural Resources, Heavy Machinery, Semiconductor, Utilities & Communications, and Transportation domains. A year back analytics and IoT space is added up to Cyient’s existing portfolio of services, which is rapidly growing with many PoCs and full projects in past, present and in pipeline. KEPL, India — *Project Manager (Mining/Tunneling)*July 2014 - Dec 2014 During this short span of time, I was working with a project management firm in India and was assigned with Delhi Metro Rail Corporation’s tunneling project at under construction metro station (underground) near domestic airport in Delhi and with Vedanta resources Plc’s Zinc and Silver mining project (underground) in India. My roles involved managing operation, controlled blasting, and constructions. IBA, LPU, VUC, India/Myanmar/Thailand — *Academics*2009 - 2014 After my MBA, I took a change in career and moved into academics for two reasons, one, I wanted to develop my skills in research by remaining among peers in the field and two, I wanted to give time to my family because in mining, family life was not satisfactory due to remoteness of work locations. Over the period of 5 years in research and academics, I published about 12 research work and case studies. I also underwent various programs to develop my statistical knowledge and skills in R and SPSS. Also this was the time when I and my wife were bestowed by a baby girl ‘Aadhya’ on Oct 4th, 2010. Zuari-Italcementi, Thiess, Bramco, KCCL, India / Indonesia / Bahrain / Philippines — GET/*Sr. Engineer/Plant Engineer/Project Manager*June 2001 - May 2008 I worked with various mining, cement, manufacturing firms in various counties. After graduating in Mining and Machinery Engineering, I started my career as graduate engineer trainee with world’s one of the largest cement manufacturing firm, Italcementi, Italy. Later I worked with THIESS (Australia), Bramco (USA) and KCC Ltd (India) on various roles. In last profile I was project manager wherein I was responsible for commissioning and running an iron ore mining business with over 300 crores of investments. EDUCATIONThe Johns Hopkins University, Online — *Data Science Specialization*June 2014 - May 2015 A sequence of nine 4-week courses followed by a culminating 8-week capstone project in association with SwiftKey. The Data Science Specialization covers the concepts and tools for an entire data science pipeline. Successful participants learn how to use the tools of the trade, think analytically about complex problems, manage large data sets, deploy statistical principles, create visualizations, build and evaluate machine learning algorithms, publish reproducible analyses, and develop data products. Indian Institute of Technology, Delhi, India — *Research Fellow*May 2014 - July 2014 Short term research program at Department of Management Studies. Worked on forecasting energy demand and production at BRICS nations. ICFAI Business School, Hyderabad, India — *Executive MBA*May 2008 - June 2009 One year business management program with major concentration on Finance while minor being marketing and operations. Internship with PwC. Indian School of Mines, Dhanbad, India — *Bachelor of Technology*May 1996 - June 2001 Graduation in Mining & Machinery Engineering. Completed over 6 months’ internships with various organizations such as NMDC Ltd, SAIL, Coal India Ltd etc. PROJECTS (ONLY MAJOR TWO OUT OF TOTAL 4 COMPLETED)Rio Tinto Minerals — *California (USA)* One of their plants, producing a types of mineral which is almost 80% of world’s total, is facing troubles with optimum yield. The goals of this process improvement analytics project are:   1. Early detection of critical conditions that will hamper the final yield of the mineral processing at the plant. Accuracy is important. 2. Predicting best operating conditions (zones) and parameters to be controlled to achieve it.   ***Data:***  Historical data (approx. 25 million observations per month x 8 months) on 150 odds operations variables (sensors, scada, gauges)  ***Tools used in descriptive, visualization and modelling:***  R, Python, Tableau and MatLab  ***Team size:***  Five members consisting of Lead data scientist, programmers, SME and architect. Philips — *Amsterdam (The Netherlands)* Prediction of particular types of faults that leads to change in a very expensive component of sub-assembly in MRI equipment (approximately 8000 installations world over). The goals of this predictive analytics project are:   1. Prediction of fault occurrences (7 faults out of some 110 odds from different categories within operations of MRI equipment). Not only accuracy in prediction but also type I and II errors are important. Not more than 1% of type II errors were allowed. 2. Survival analysis of parts replacement history and prediction of part replacement for improved management of inventory.   Their service teams (maintenance crew) want accurate information so that they could plan not only inventory but also maintenance activities and workforce.  ***Results:***  Models were developed and deployed successfully in phase I (symbolic dynamics and feature engineering were used along with other high end statistical models to develop failure prediction algorithm and early warning alarm system). They reported improvement in final operational yields. More results are awaited. Also some issues are being resolved. Expecting another project from Rio Tinto.  ***Data:***  Historical data (1.5 years, stored into HP Vertica ecosystem and updated every day) on some 1500 odds operations variables (90 tables). Secured read only access to the ecosystem (Vertica) using Philips VPN.  ***Tools used in descriptive, visualization and modelling:***  R, Tableau and RapidMiner  ***Results:***  RapidMiner models using R integration were developed and deployed successfully in Phase I. Client reported overall 10% improvement in related operations. We are likely to start Phase II soon for other equipment. | RELEVANT SKILLS Business issue understanding, meetings with client and initial project plan, timeline set up, project charter formation and signing off legal docs such as NDAs  Setting up environment for project (data storage, version control of codes etc.)  Data cleaning and preparation. Hypothesis formation setting up validation rules (e.g. client’s approvals).  Retrospective analytics (Descriptive statistics, visualization and inferential reports.)  Machine Learning, predictive modeling and reports.  Deployment of models in client’s ecosystem / business unit  Meetings with clients and issue resolution. AWARDS Earned the "Achievement Badge" for the efforts in the "Pattern Discovery in Data Mining" course offered by the University of Illinois at Urbana-Champaign.  Awarded “Mastery Badge” and inducted into “Hall of Fame” in “Cluster Analysis Course” of University of Illinois at Urbana-Champaign at Coursera.org - One of the total 908 such selected students out of 38000+ enrolled.  Distinction in Data Science Capstone Project.  Youngest member of energy conservation committee and head of condition based monitoring project at Zuari-Italcementi. LANGUAGES ***R*** and ***Python*** other than ***Hindi*** (native speaker), ***English*** (full professional proficiency) and ***Bahasa Indonesia*** (limited working proficiency). TOP PUBLICATIONS “An Application of Time Series ARIMA Forecasting Model for Predicting Sugarcane Production in India", Studies in Business and Economics (ISSN: 1842 - 4120 / E-ISSN: 2344 - 5416) [Cited by 6]  “Assessing Financial Health of a Firm Using Altman’s Original and Revised Z-Score Models: A Case of Kingfisher Airlines Ltd (India)”, Journal of Applied Management and Investments (JAMI - ISSN: 2225-3467), Ukraine, March 2103 [Cited by 2]  "Factors Affecting Tax Payers’ Decisions in Saving Tax by Investing in Tax Saving Bonds: A Study in U.P. State, India", Journal of Financial Assets and Investing, Vol 5, No 1, [ISSN: 1804–5081], Czech Republic [DOI: 10.5817/FAI2014-1-2]  "Forecasting Tourist In-Flow in South East Asia: A case of Singapore", Journal of Tourism & Management Studies (ISSN 2182-8466), Vol. 12, No. 1, pp. 107-119, Portugal [DOI: 10.18089 / tms.2016.12111]  “Exploring EVA® and Dividend Payout Relation: A Case of Reliance Infrastructure Ltd”, Journal of GNA-IMT(ISSN- 09745726) Vol VIII, NO: 2 (December 2013)  Book review of “Marketing Research: A Practical Approach - Authored by Dr. Bonita M. Kolb, Sage Publication: USA”, Serbian Journal of Management (ISSN: 2217-7159), Vol. 8, No. 9, April, 2013 [DOI: 10.5937/sjm8-3700]  "Escaping the media limelight: The case of Myra-Rose", Case Reference no. 915-026-1, Field research, The Case Centre (Formerly European Case Clearing House, UK), 2015  "The Operations of an Eye Hospital", Case Reference no. 515-186-1, Field research, The Case Centre, 2015 RELEVANT CERTIFICATIONS Business Analytics (online) - University of Pennsylvania  Machine Learning (Online) - University of Washington (Pursuing)  Strategic Business Analytics (Online) - ESSEC Business School (only Capstone Pending) PERSONAL INFO Date of Birth: January 29, 1975  Passport: J6748159 (Expiry May 09, 2021)  Hobbies: Blogging  (<http://mkmanu.wordpress.com>) PERMANENT HOME ADDRESS House No. 3, Niharika Colony, Shastripuram,  Sikandra, Agra, Uttar Pradesh, 282007, India |