



Nikhil Vidhani

Lead Data Scientist, Target Corporation

Executive Summary

I work as a Lead Data Scientist in the Digital Fulfillment team at Target Corporation. Our team builds digital supply chain simulation capability, which enables business teams to run what-if scenarios. I earlier worked with WNS Global Services, where I guided a team of data scientists in building data analytics apps in F&A domain. I hold a Ph.D. in Finance and Accounting from IIM Bangalore and a masters from IISc Bangalore. I have presented my research at several prestigious international conferences. Besides, I have also trained hundreds of students and practitioners in R programming and data analysis.

Industry, Research, and Teaching Experience

- 2022– **Lead Data Scientist**, *Target Corporation, Bangalore*, Building supply chain simulation, available to promise (ATP), order allocation, big-data pipelines; code review.
- 2022–2022 **Sr. Group Manager (Data Science)**, *WNS Global Services, Bangalore*, Building F&A apps in payments, collections, reporting, prediction, and auditing; Maintain codebase (github), APIs, deployment automation; Conduct Knowledge-sharing Sessions.
- 2016–2022 **Research Scholar**, *Indian Institute of Management, Bangalore*, Ideating research problem; identify data sources, collect/clean/transform data, model building (regression/ML/NLP); drafting research papers; presenting in conferences; <https://github.com/nik141088>.
- 2018–2022 **Primary Instructor**, *R Programming; R Programming and Data Analysis; Introduction to Latex*, Training students and practitioners. Instructor Rating: 4.7/5. <https://github.com/nik141088/applied-R>.

2012–2016 **Sr. Software Engineer**, *Cisco Systems, Bangalore*, Design, code, test, and documentation of 4G-LTE and WiFi nodes; High Availability/Redundancy architecture; Network security.

Major Projects

- Target **Promise Simulator**, Built available-to-promise (ATP) simulator from scratch. Enabled users to configure data sources, key algorithmic decisions to drive maximum usability across data-sciences, product, and business..
- Target **Logging Infra**, Added logging infra in our in-house simulation capability to understand allocation level decisions. Built as a post-mortem tool to analyse previous simulation runs..
- WNS **QA Analytics**, Highly configurable workflow tool designed to catch human errors in invoice indexing. Additionally, the tool provides a one-stop solution for outlier and anomalous transaction detection. Used by multiple auditors within WNS.
- WNS **Excel-API**, ML solution built with h2o framework and deployed through portable-R and plumber API. Helps controllers predict errors right from the comfort of excel.
- WNS **WNS Predictor**, A shiny application focused on democratizing machine learning by automating modeling and prediction for non data-scientists.
- Personal **Invoice Processing**, Deep Learning based tool to detect duplicate invoices. Comparison based on raw bytes, image, and OCR text. <https://github.com/nik141088/invoice-processing>.
- IIMB **Factiva Download**, Web-scraping and article extraction project to study news sentiment and accounting behavior. <https://github.com/nik141088/factiva-download>.

Tools and Skills

- Expert **Data Science and Engineering**, *R, RStudio, Python, Shiny, debugging, data.table, computation.*
- Advanced **Machine Learning and Big Data**, *Regression, Classification, Decision Trees, NLP, h2o, pyspark, hadoop, SQL.*

- Advanced **Programming**, *Algorithms, Data Structures, complexity, vectorization, C, Linux, security, OS, selenium.*
- Advanced **Visualization and Documentation**, *ggplot, plotly, R Markdown, Latex, MS Office.*
- Expert **Domain Knowledge**, *Finance, Accounting, Statistics, Regression Analysis, Algorithms, Computation, R-Programming.*
- Advanced **Deployment**, *github, AWS, Programmatic Access, API, Databases, git, CI/CD.*
- Progressive **Management**, *Leadership, mentoring, project management.*

Education

- 2016–2022 **Doctor of Philosophy**, *Finance and Accounting*, Indian Institute of Management, Bangalore.
○ CGPA: 3.64 / 4.00
- 2010–2012 **Master of Engineering**, *Electrical Communication Engineering*, Indian Institute of Science, Bangalore.
○ CGPA: 6.4 / 8.0; Project Grade: A
- 2006–2010 **Bachelor of Technology**, *Electronics and Communication Engg.*, Bundelkhand Institute of Engg. and Tech., Jhansi (U.P.).
○ 73.6 %
- 2004–2006 **Schooling (12th Standard)**, *Science*, C.B.S.E..
○ 88.2 %

Awards and Honors

- 2022 **Tech Genius, Transforming the Organization, Victory Fleet**, WNS Global Services.
- 2020 **Mirae Asset Scholarship (PhD Year 5)**, Indian Institute of Management.
- 2017–2018 **Director's Merit List (PhD Year 1 and 2)**, Indian Institute of Management.
- 2016 **96.5 percentile**, *Common Aptitude Test (CAT)*.
- 2010 **All India Rank 20 out of 105,000 participants**, *Graduate Aptitude Test in Engineering (GATE)*.
- 2006–2007 **Merit Scholarships**, *Intermediate Examination and Engineering.*

Publications

Sunny, A., Panchal, S., **Vidhani, N.**, Krishnasamy, S., Anand, S., Hegde, M., Kuri, J., & Kumar, A. (2017). *A generic controller for managing TCP transfers in IEEE 802.11 infrastructure WLANs*. Journal of Network and Computer Applications, Vol 93, pp 13–26. DOI: <https://doi.org/10.1016/j.jnca.2017.05.006>.

Impact Factor: 6.28

Vidhani, N., (2022). *Return Predictability using Price-to-Earnings Ratio*. SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3910641.

Revise and Resubmit: Journal of Forecasting, ABDC-A

Impact Factor: 2.31

Conferences: *International Conference on Derivatives and Capital Markets (ICDCM-2021)*[#], *World Finance and Banking Symposium (WFBS-2021)*[#], *India Finance Conference (IFC-2021)*[#], *15th NYCU International Finance Conference (2021)*[#], *Asian Management Research and Case Conference (2022)*[#]

[#] selected but not presented

Vidhani, N., (2022). *Trading Volume and Dispersion of Signals*. SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3682088.

Submission Journal: The Journal of Finance, FT50

Conferences: *International Conference on Derivatives and Capital Markets (ICDCM-2020)*, *International Risk Management Conference (IRMC-2020)*, *Southern Finance Association (SFA-2020)*, *Conference on Asia-Pacific Financial Markets (CAFM-2020)* Doctoral Consortium, *World Finance and Banking Symposium (WFBS-2020)*, *Theories and Practices of Securities and Financial Markets (SFM-2020)*, *12th Emerging Market Finance Conference (2020)*, *Southwestern Finance Association (SWFA-2021)*, *International Conference of the French Finance Association (AFFI-2021)*, *IIM Bangalore*

Krishnan, M., Rangan, S., & **Vidhani, N.**, (2021). *Pricing of Earnings in the Presence of Informed Trades: A Simple GMM Approach*. SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3560147.

Under Review: Review of Economics and Statistics, ABDC-A*

Conferences: *2015 NSE-NYU Conference*[#], *CAFRAL at RBI*[#], *IIM-Calcutta Finance Research Workshop*[#], *3rd JAAF-India Conference*[#], *IIM Bangalore*[#], *IIT-Madras*[#], *IIT-Kharagpur*[#], *University of Washington*[#]

[#] presented by co-authors