

ASHUTOSH R. NANDESHWAR, Ph.D.

[linkedin.com/in/ashutoshnandeshwar](https://www.linkedin.com/in/ashutoshnandeshwar) | www.nandeshwar.info

DATA SCIENCE EXECUTIVE

Analytics | Artificial Intelligence | Machine Learning | Product Strategy & Innovation

The quality of your data analysis is only as good as the action you take on it.

Innovator and author of two books who uses data science and design thinking to generate novel solutions to business problems that help companies operate more efficiently and generate revenue. Visionary and [thought leader](#) in the data science field with gift for storytelling and incorporating humor into business presentations. Builder and leader of high-performing data science, analytics, and engineering teams that comprise both leaders and individual contributors.

- Deep experience developing successful analytics-based solutions to business problems that directly impact how companies design, plan, and value their offerings.
- Skilled at having an impact in complex or ambiguous problem spaces that cannot be empirically proven and that require blending data and scientific methods with judgment-based approaches.

BOOKS

- Co-author: [Data Science for Fundraising with R](#)
- Author: [Tableau Cookbook](#)

KEY SKILLS

- Data-Driven Business Strategy
- Storytelling
- Machine Learning
- R Programming
- Data Science Team Building
- Verbal/ Written Communication
- Data Visualization
- Tableau
- Relationship Building
- Effective Design Principles
- Data Engineering
- SQL
- Complex Problem Solving
- Business Presentations
- Predictive Analytics
- Python

EXPERIENCE

Assistant Vice President, Relationship Management and Data Sciences *University of Southern California*

2016 - Present
Los Angeles, CA

Develop and launch predictive models, [tools](#), and analytical engines, including the discovery and identification of prospects worth \$3B+ to the university's fundraising efforts. Implemented interactive Tableau Server reports and dashboards that support the data needs of more than 450 employees. Building/ training a new data science team and lead 19 information professionals (5 direct reports) to efficiently scale USC's automated information search and delivery capabilities.

- Established an automated End-of-Month performance report covering >150 fundraisers responsible for more than \$600M per year.
- Decreased the delivery of prospect leads from 4 weeks to 1 (75%), generating \$150K in annual FTE savings, by overhauling and fully automating the process.
- Eliminated a \$100K annual expense on an external data tool, saved \$20,000 in design costs, and transformed department-wide data/insights delivery from manual to automated.

Director, Prospect Development and Analytics *California Institute of Technology*

2014 - 2016
Pasadena, CA

Pioneered prospect strategies and data products in partnership with fundraising managers and their teams. Supervised 9 analytics and information professionals (3 direct reports). Developed the skills of the-person analytics team to create new data products helping increase revenue.. Partnered with business partners and fundraising managers to champion the creation of full-scope prospect management policies and strategies.

- Generated prospect lists worth >\$2B for fundraisers by using machine learning to predict giving intent and likelihood.
- Served as a subject matter expert and collaborated with cross-functional teams to convert the department's CRM from Millennium to Advance Web.

- Enabled senior management and the board of trustees a way to instantly evaluate the performance of 12+ fundraisers tasked with bringing in \$50M to \$100M per year by spearheading the development of balanced scorecards and dashboards.
- Slashed reporting time from roughly 1 week to minutes, enabling staff to easily generate lists by themselves instead of going through a reporting team, by sourcing and launching a self-service platform.

Director, Advancement Information Systems and Analytics

California Institute of Technology

2013 - 2014

Pasadena, CA

Managed division's \$1M+ IT budget with an emphasis on offering flexible computing power to end users via building partnerships with computer tech providers. Directed 9+ information professionals maintaining and reporting donor data.

Associate Director of Analytics

The University of Michigan

2010 - 2013

Ann Arbor, MI

Recruited to build Michigan's first-ever fundraising analytics function and team. Implemented data science curriculum and training program. Hired, mentored, and developed a team of two analytics professionals. Established a data-driven culture by educating and training a fundraising community of more than 600 people. Pioneered multiple data products – such as web-based analytics applications, predictive models, and natural language processing solutions – to identify and segment donors, find high-value leads, and forecast for campaigns worth billions of dollars.

- Exploded the athletic department's revenue from \$6.2M in FY10 to \$75M in FY14 by identifying new regions and prospects.
- Instrumental in Michigan becoming the first public university to raise \$5B in the most successful fundraising campaign in its history, with more than 382K donors, by designing and building a web-based interactive tool that >15 teams used to qualify and assess the prospect pool.

Sr. Institutional Research Information Officer

Kent State University

2006 - 2010

Kent, OH

Used Artificial Intelligence to create predictive models to improve fundraising, recruitment, retention, and graduation with more than 35K students and 140K course registrations. Oversaw development of data extraction, as well as data reporting solutions and applications, to support the university's budgeting and administrative functions. Designed and developed a local data warehouse and university-wide dashboards/scorecards.

- Enabled administrators to project revenues in support of the school's \$600M annual budget for the first time in Kent State's history by building a self-service, easy-to-use web application.
- [Predicted retention 15 to 20 percentage points](#) higher than baseline and uncovered the root causes of student retention and failure to graduate with machine learning models.

EDUCATION

Master of Science (MS) in Integrated Design, Business and Technology

University of Southern California

Awarded: 2021

Los Angeles, CA

Doctor of Philosophy (PhD) in Industrial Engineering

West Virginia University

Awarded: 2010

Morgantown, WV

- Dissertation: Longitudinal Study of First-time Freshmen Using Data Mining; designed machine learning studies to identify patterns, reducing recruiting costs and increasing retention

Master of Science (MS) in Industrial Engineering

West Virginia University

Awarded: 2006

Morgantown, WV

- Thesis: Models for Calculating Confidence Intervals for Neural Networks; used non-linear regression (NLR), bootstrapping, maximum likelihood estimation (MLE) to calculate confidence intervals on the predictions of neural networks.

Bachelor of Engineering (BE) in Industrial Engineering

Nagpur University

Awarded: 2000

Nagpur, India

PROFESSIONAL DEVELOPMENT

- **University of South Florida:** Diversity, Equity, and Inclusion in the Workplace Certificate Program, May 2021
- **Stanford Continuing Studies:** Building and Scaling Subscription Businesses, May 2021
- **Craig Valentine, a world champion of public speaking:** One-on-one public speaking coaching
- **Upright Citizens Brigade (USB):** Improv 101 and 201; Sketch Writing 101

- **The Association**, a Filmmaking Bootcamp led by a two-time Emmy award winner filmmaker

PROFESSIONAL ASSOCIATIONS

- Board Member | Secretary, Apra** 2015 - 2019
- Led the Data Science training/curriculum task force.
- Organizing Committee Member, CASE Data and Analytics Conference** 2017 - 2018

SELECT PUBLICATIONS

- Nandeshwar A., *Survey of Predictive Analytics in Fundraising*, Proceedings of Texas Advancement Analytics Symposium, 2020
- Nandeshwar A., Menzies T., Nelson A., *Learning Patterns of University Student Retention*, Expert Systems with Applications, 2011, DOI: 10.1016/j.eswa.2011.05.048. Citations: 120.
- Nandeshwar A., *Thinker's Game: Maximizing Data Analysis Through Critical Thinking*, Apra Connections 25 (1), 19-22, 2014
- Nandeshwar, A., Chaudhari, S., *Enrollment prediction models using data mining*, 2010, Citations: 36.

SELECT PRESENTATIONS

- Nandeshwar A., *Opening Keynote: AI for fundraising*, Blackbaud Higher Ed Exec Forum 2018
- Nandeshwar A., *Closing Motivational Keynote: Soar in your career*, DRIVE 2018
- Nandeshwar A., *Closing Motivational Keynote*, OPRN 2016
- Nandeshwar A., *Opening Motivational Keynote*, CARA 2015
- Nandeshwar A., *Opening Tech Keynote*, APRA-NW 2015