Dr. Sayaji Hande

Professor, Author, Board Member and Industry & Research Leader in AI & Statistical Machine Learning

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SUMMARY

An established leader in Artificial Intelligence, Machine Learning, and Statistics, **with over 31 years of expertise in the technology field** focusing on innovations and product development leveraging AI and Statistical Machine Learning. I have worked in leadership roles across leading multinational technology companies and in globally renowned universities as a faculty member. **I have over 20 patents and publications to my name** in the applications of statistical machine learning across digital industries. I have received multiple global recognitions for my work, especially my **seminal work in computational statistics by providing the proof for Bapat-Beg theorem**. The Govt. of India appointed me as one of the board members for the school of Computer Science & Mathematics for the Central University of the Indian State of Rajasthan and I have led the establishment of three global companies in India - **Flagstone India**, **marketRx India (acquired by Cognizant Technologies) and Parsec Software**.

INDUSTRY AND ACADEMIC EXPERIENCE

I am Still Alive, India   **Director, Team India**   Since Jan'24
- Led strategic initiatives to optimize company operations, driving substantial organizational impact and growth.
- Managed and coordinated cross-functional teams to ensure seamless alignment with corporate objectives.
- Established and nurtured partnerships with key stakeholders to improve service delivery, focusing on innovative support mechanisms for cancer patients.

Shivaji University, Kolhapur, India   **Adjunct Professor, Computer Science & Statistics**   Since Jun'23
- Teaching advanced courses in the Artificial Intelligence and Machine Learning area
- Conducting research on statistical machine learning methods and applications to financial informatics
- Developed a new foundational course for undergraduate students with research interests.
- Authored a foundational book "Mathematics Behind Artificial Intelligence & Machine Learning" *(under editing)*

Codvo.AI, Pune, India   **Industry & Research Advisor – AI and Machine Learning**   Since Apr'23
- Providing guidance and expertise in AI and machine learning projects for building AI products
- Advising in defining research objectives and selecting appropriate methodologies for product development and modelling
- Codvo.ai is a leader in AI-powered solutions, helping industries (e.g., energy, supply chain, healthcare, FinTech) to transform operations.

ICFAI Tech School, Hyderabad   **Professor, Computer Science and Data Science**   2018-2021
(Part of The ICFAI University, India)
- Conducting research focusing on Machine Learning and AI at one of the top-ranking engineering institutes in India.
- Teaching graduate and undergraduate students' courses spanning from foundational courses to advanced statistical courses.
- IFHE is one of the largest multidisciplinary universities in India, with an active strength of 10,000+ students.
- Published fundamental paper on 'Network flow Optimization through Monte Carlo Simulation.'

Adobe Systems, Bangalore, India   **Senior Research Scientist (Adobe Research Labs)**   2012-2014
- Led Adobe's research teams on to build innovative AI based technologies for Adobe's Experience Cloud
- Led research on applications of statistical models, particularly experimentation to the digital marketing industry.
- Co-inventor for 3 patents for innovations in Digital Marketing field, which are part of Adobe's Experience Cloud products.

Central University of Rajasthan   **Board Member - School of Computer Science & Mathematics**   2009-2014
(Govt. of India)
- Nominated by Govt. of India as member of the board of education to lead Rajasthan's Central University
- Played a key role in the long-term vision for the university, collaborating with the leadership to develop strategic plans for advancement of education and research.
- Formulated operational policies for better governance including curriculum, faculty appointments & budgeting.

NEXTGEN Innovation Labs (NIL), India   **Senior Director, Analytics & Innovation**   2010-2012
- Leading the Telecom innovation team for development and commercialization of telco digital products
- Led to team to build and launch patented analytical products for telecom market on consumer experience management.
- Filed two patents with US Patent office, on innovations related to telco experience and market share management.

Cranes Software Inc, India **Vice President, Analytics** 2008-2009
- Vice President and Chief Statistician for Indian Ministry of Finance project leading Statistical Analysis Centre and risks detection.
- Built technology product approaches and process refinements to drive incremental savings of USD 150 million.
- Developed digital pricing and valuation products based on SAS architecture and advanced statistical machine learning techniques.

Flagstone Research, India **Senior Vice President, Analytics** 2005-2007
- Established Indian operations and business for Flagstone Capital, a global fintech giant.
- Led software product development and launch for automation for insurance profiling (DFA), catastrophic reinsurance, asset management and liability management.

IBM Research Labs (IBM Corporation) **Research Scientist, Computer Science & Data Science** 2004-2005
- Led research, innovation and product development teams on data analytics products and process development for wildfire management, budgeting, predictions, and optimizations for dynamic pricing for railway - one of the world's first dynamic pricing techniques.
- Worked with Government project on launch and integration of the product with analytics and response infrastructure.

marketRx India (Acquired by Cognizant Technologies) **Vice President, Advanced Analytics** 2003-2004
- Established India operations of the multinational Pharma-tech company, led acquisition by Cognizant for USD 170 Million
- Led the technology team for pharma-tech products including sales lifecycle management and B2B e-commerce.

GE Capital India **Assistant Vice President, Analytics Center of Excellence** 2001-2003
- Leading global statistical modeling and technology product teams related to PLCC (Private Label Credit Cards) to build products for various digital campaigns with appropriate test and control.
- Key products include PLCC Promotions – Risk Response matrix, Data Mart management application, report production and analysis.
- Led independent assessment of service quality for the competition commission in Canada.
- Filed two patents on innovations in fintech related to statistical modeling and machine learning.

Parsec Software, India **General Manager, Technology** 1999-2001
- Led analytical product teams for feasibility and prototype design, leading development and test environments and launching products in the market related to voicemail and call-center operations.
- Parsec was one of the largest telephony companies in India with state of the are Voicemail and Call center software.

Johnson Controls, India **Project Manager** 1996-1999
- Led project delivery and management for firmware development for TM9180 thermostat and integrated network devices. This included display for network applications, configuration tools and compiler development.

Cytel Software Incorporation, Boston **Software Engineer** 1994-1996
- Led the software engineering of StatXact, LogXact and StatTable technology products for biostatistics applications.
- Developed and applied innovative data compression techniques such as Markovian techniques, substitutions (dynamic and static) and optimal encoding with C/ C++; Java

Indian Statistical Institute **Visiting Scientist, Statistics** 1992-1994
- Teaching statistical courses in the world-renowned institute recognized as an Institute of National Importance by Indian Government.
- Conducting research on statistical machine learning methods and their applications.

PUBLICATIONS AND PATENTS

- Predicting spread of content across social networks *(US Patent 11,095,597)* *(link)* 2021

- Normalizing user responses to an event by removing behavioral bias *(US Patent 10,318,971)* *(link)* 2019

- Network flow Optimization through Monte Carlo Simulation *(International Conference on Parallel, Distributed & Grid Computing) (link)* 2018

- Seed group selection in a probabilistic network to increase content dissemination *(US Patent 9,524,527)* *(link)* 2016

- Method for measuring market share for a communication service provider *(US Patent App. 13/195,731)* *(link)* 2013

- Effective method of measuring wireless consumer experience insights *(US Patent App. 13/022,907)* *(link)*   2012

- Statistical proofs of some matrix results (*Journal: Linear and Multilinear Algebra 38 (1-2), 109-116)* *(link)*   2007

- Some majorization properties of order statistics from heterogeneous populations *(Metron-International Journal of Statistics)* *(link)*   2001

- Statistical Models for Consumer Preferences *(Journal of Indian Statistical Association)* *(link)*   1997

- A note on order statistics for nondentically distributed variables *(Sankhyā: The Indian Journal of Statistics)* *(link)*   1994

- An optimal sequential procedure for ranking pairwise compared treatments (*Calcutta Statistical Association Bulletin 43)* *(link)*   1993

- Single-sample Bayes and empirical Bayes rules for ranking and estimating multinomial probabilities *(Journal of statistical planning and inference)* *(link)*   1993

- Contributions to nonparametric selection and ranking procedures *(Purdue University ProQuest Dissertations Publishing)* *(link)*   1992

- Some Results On Bayes and Empirical Bayes rules for Ranking Pairwise Compared Treatments *(Purdue University, Department of Statistics)* *(link)*   1991

- Single-stage Bayes and empirical Bayes rules for ranking multinomial events *(Purdue University, Department of Statistics)*   1991

- On Selecting a Population Close to a Control: A Nonparametric Approach *(Purdue University, Department of Statistics)* *(link)*   1990

- On Some Nonparametyric Selection Procedures *(US Defense Technical Information Reports)* *(link)*   1990

- Nonparametric Selection, Ranking and Testing *(US Defense Technical Information Reports)* *(link)*   1990

- Lagrange's Bound for the Roots of a Polynomial *(Bulletin, Bombay Mathematical Colloquium, volume 3)*   1985

EDUCATIONAL QUALIFICATIONS

Purdue University, USA - PhD in Statistics (1992), GPA 6.0/6.0

Purdue University, USA - MS in Statistics (1989), GPA 6.0/6.0

Indian Statistical Institute, Calcutta, India - M. Stat. (1986), First