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P C Mahalanobis : A Statistical Legacy in Economic Planning and Data Science

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Abstract: Prasanta Chandra Mahalanobis (1893-1972) was an Indian statistician and economist who made significant contributions to statistical theory, economic planning and analysis of large-scale data. His work on the Mahalanobis Distance continues to be at the core of Multivariate analysis with applications from machine learning, outlier detection and pattern recognition. Mahalanobis Model was instrumental in India's economic planning and his work towards large scale sample surveys brought a revolutionary change in the process of data collection. In the context of UGC's focus on Indian Knowledge System (IKS), going through Mahalanobis' work brings forth India's intellectual legacy and how well they remain applicable in contemporary scientific and policy making paradigms. His work represents a reconciliation of classical Indian mathematical heritage and worldwide statistical innovation, to construct data-driven governance and inter-disciplinary education. This paper continues the tradition in Statistics and economics of illustrating the enduring relevance of his method to this day in AI, economic prediction and public policy.

Keywords: Economic planning, Mahalanobis model, Mahalanobis distance, Multivariate statistics, Indian Knowledge System (IKS), Statistical sampling, Machine learning Applications, Data Driven Governance



