(54) Title of the invention : NeuroCommerce: Brainwave-Based Product Affinity Prediction Engine

(51) International classification	:A61B0005000000, G06Q0030060100, G06Q0030025100, G06Q0030020000, G06N0007010000	(71)**Name of Applicant :** 1)**Dr. Genu Roney Varghese** Address of Applicant :Spicer Adventist University Campus (formerly known as Spicer College), Aundh Pune. Maharashtra India 2)**Dr. Man Singh** 3)**Purnima Awasthi** 4)**Ranjan Banerjee** 5)**Dr. Avijit Kumar Chaudhuri** 6)**Debmalya Mukherjee** 7)**Dr. Tanima Tarafdar** 8)**Pranab Gharai**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	(72)**Name of Inventor :** 1)**Dr. Genu Roney Varghese** 2)**Dr. Man Singh** 3)**Purnima Awasthi** 4)**Ranjan Banerjee**
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number Filing Date	:NA :NA	5)**Dr. Avijit Kumar Chaudhuri** 6)**Debmalya Mukherjee** 7)**Dr. Tanima Tarafdar**
(62) Divisional to Application Number Filing Date	:NA :NA	8)**Pranab Gharai**

(57) Abstract :

The current invention pertains to a system and procedure of estimating product affinity through the analysis of brainwave, which is used to maximize individualisation in e-commerce websites. The invention is a creation that records brainwave signals of a user using non-invasive sensors and then processes such signals to eliminate the noise and interference. Based on these signals, emotional and cognitive aspects of attention, engagement, and emotional response can be obtained. These attributes are then evaluated on the basis of highly advanced machine learning models to produce affinity scores that provide the likelihood of user preference of particular products. The results of the generated scores are then fed into an e-commerce recommendation engine where product listing can be ranked dynamically and personalized in real time. The system is also user-feedback adaptive and keeps on refining predictions such that it is always responsive and personalized in the long run. Through the use of neurophysiological cues instead of basing the product suggestion only on behavioral data, the invention offers a more precise and subconsciously-inspired method of product suggestion, overcoming the traditional shortcomings of the current system in the form of the cold start problem and unclear consumer behavior.

No. of Pages : 22 No. of Claims : 6