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(54) Title of the invention : An intelligent gender identification method based on facial images using compound modules

(51) International classification	:G06V0040160000, G06F0018243000, G06N0020100000, G06F0018241100, G06F0017140000	(71)**Name of Applicant :** **1)SWAMI VIVEKANANDA UNIVERSITY** Address of Applicant :Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat ----------- ----------- **Name of Applicant : NA** **Address of Applicant : NA** (72)**Name of Inventor :** **1)Payal Bose** Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY, Telinipara, Barasat - Barrackpore Rd,Bara Kanthalia, West Bengal – 700121 Barasat ----------- ----------- **2)Sangita Bose** Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY, Telinipara, Barasat - Barrackpore Rd,Bara Kanthalia, West Bengal – 700121 Barasat ----------- ----------- **3)Sourav Saha** Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY, Telinipara, Barasat - Barrackpore Rd,Bara Kanthalia, West Bengal – 700121 Barasat ----------- -----------
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(57) Abstract :
The present invention relates to an automated system and method for gender classification using facial recognition technology. The system utilizes a two-module approach, comprising an Automated Face Identifier (AFI) and an Automated Gender Identifier (AGI). The AFI module detects a human face from an input image, identifies key facial landmarks (such as the eyes, nose, and mouth), and extracts facial features using frequency domain analysis techniques, including Fast Fourier Transform (FFT) and Discrete Cosine Transform (DCT). The AGI module classifies the gender of the individual based on the extracted features using machine learning algorithms, such as Support Vector Machine (SVM), Decision Tree (DT), and Random Forest (RF). The system can process both static images and video frames, offering a highly accurate gender classification with up to 97.12% accuracy using the Random Forest algorithm. This technology has broad applications in fields such as security, surveillance, and human-computer interaction, providing an efficient and scalable solution for real-time gender prediction.

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