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(57) Abstract :

The present invention discloses a wearable band (100) configured for real-time prime number detection using a pattern recognition processor (140). The band features a microcontroller (120), input keypad (130), display unit (150), and feedback module (160) to provide visual or tactile confirmation. The embedded algorithm adaptively identifies primes and stores user data in memory (180). The system supports cloud synchronization and retraining, making it a dynamic educational tool for mathematical engagement, accessible to users in various learning contexts.

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