Automatic Writing Machine

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Abstract: *This paper presents the development of an Automatic Writing Machine designed to automate basic handwriting tasks using an Arduino-based control system. The proposed system converts programmed instructions into precise pen movements on paper. It utilizes an Arduino microcontroller, motor drivers, and servo motors to control motion along horizontal and vertical axes. By coordinating motor movements, the machine is capable of writing letters, words, and simple shapes with consistent spacing and alignment. The primary objective of this project is to reduce manual effort in repetitive writing activities such as form filling, multiple document preparation, and pattern drawing. The system is developed with a focus on simplicity, affordability, and ease of implementation, making it suitable for academic and small-scale applications. Testing results indicate stable motor control, smooth pen operation, and satisfactory writing accuracy. The project demonstrates how embedded systems and mechanical components can be effectively combined to create a compact and efficient automated writing solution.*

Keywords: Arduino Automatic Writing Machine, Embedded Systems, Servo Motors, Motion Control, Handwriting Automation, Microcontroller, Mechanical Design, Automation System, Motor Driver