Task #4 – User Persona

Category	Details
Persona Name	Arjun Mehta
Personal Information	**Age:** 25 **Occupation:** Embedded Systems Engineer at an IoT startup. **Location:** Bangalore, India **Education:** BTech in Electronics and Communication Engineering **Marital Status:** Single **Income:** ₹8 LPA
Goal and Objectives	**Primary Goal:** Develop and prototype IoT-based solutions efficiently while minimizing hardware-software integration issues. **Objectives:** Improve debugging and testing efficiency - Reduce design errors in PCB prototyping - Stay updated on the latest microcontroller advancements - Transition from prototyping to scalable production
Psychographic Information	**Interests:** DIY electronics, open-source hardware, automation, smart home tech. **Choices:** Prefers modular, customizable development boards over pre-built solutions. **Personality Traits:** Analytical, detail-oriented, perfectionist, innovative thinker, cautious about new platforms but open to experimentation.
Behavior and Preference	**Tech Habits:** Heavy use of microcontrollers like STM32, Raspberry Pi, and Arduino. Follows GitHub repositories and online hardware communities. **Communication Style:** Direct and technical, prefers documentation and practical examples over lengthy discussions.
User Journey	**Scenario 1: Rapid Prototyping** - Orders components online (Mouser, Digi-Key) - Uses PCBWay for custom board manufacturing - Tests firmware and hardware integration, debugs issues. **Scenario 2: Learning New Hardware** - Reads datasheets, GitHub documentation - Joins forums and online communities - Experiments with real-world applications. **Scenario 3: Scaling a Project** - Faces manufacturability issues - Seeks expert advice on DFM (Design for Manufacturing) - Evaluates cost-effective production options.
Challenges and Pain Points	**Hardware Debugging:** Firmware compatibility issues. **Time Constraints:** Balancing work, learning, and side projects. **Component Availability:** Struggles with delays in sourcing parts. **Scalability Issues:** Transitioning from prototype to mass production. **Information Overload:** Too many microcontroller choices and toolchains