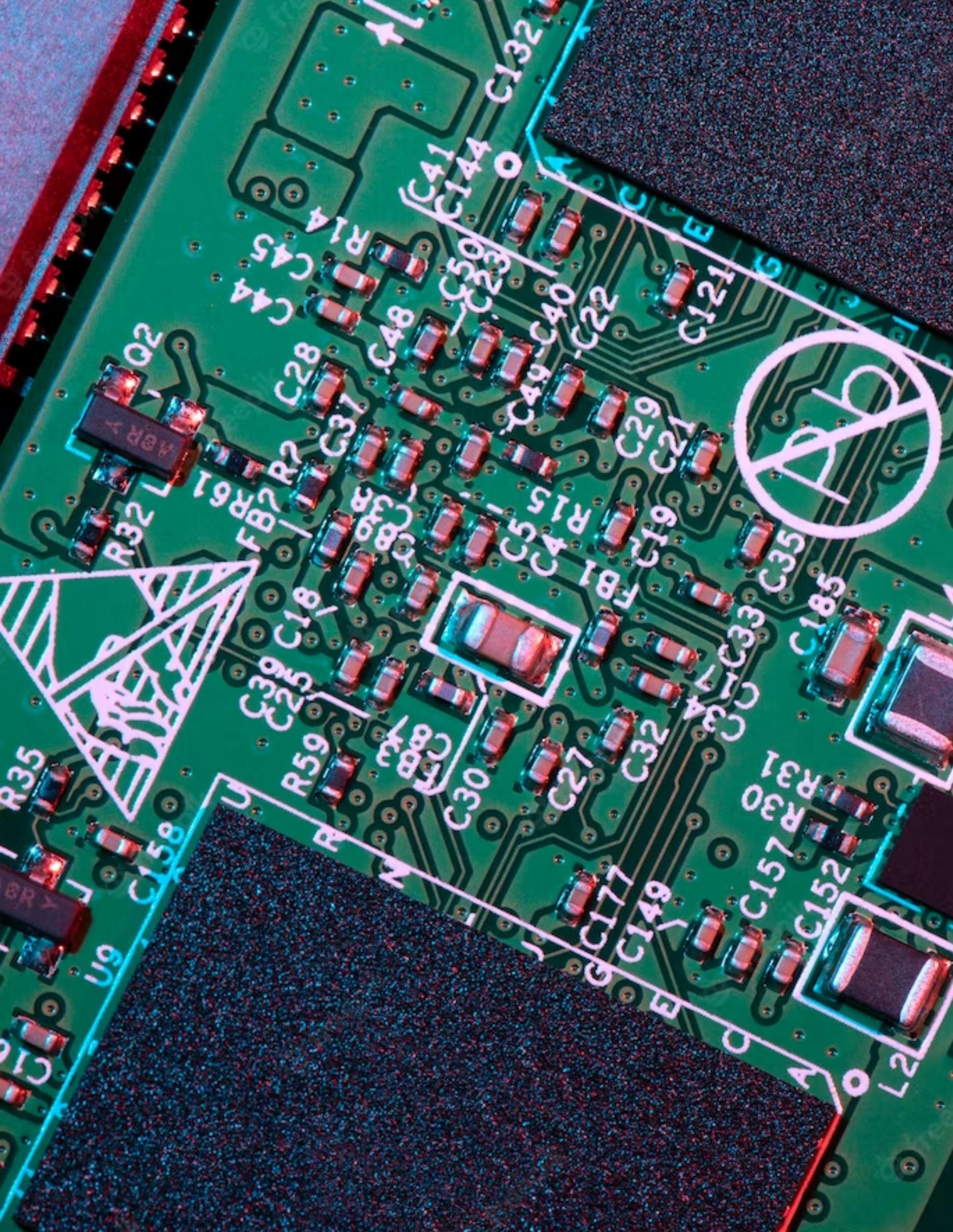


Getting Started with Arduino: An Introduction to the Basics of Microcontrollers

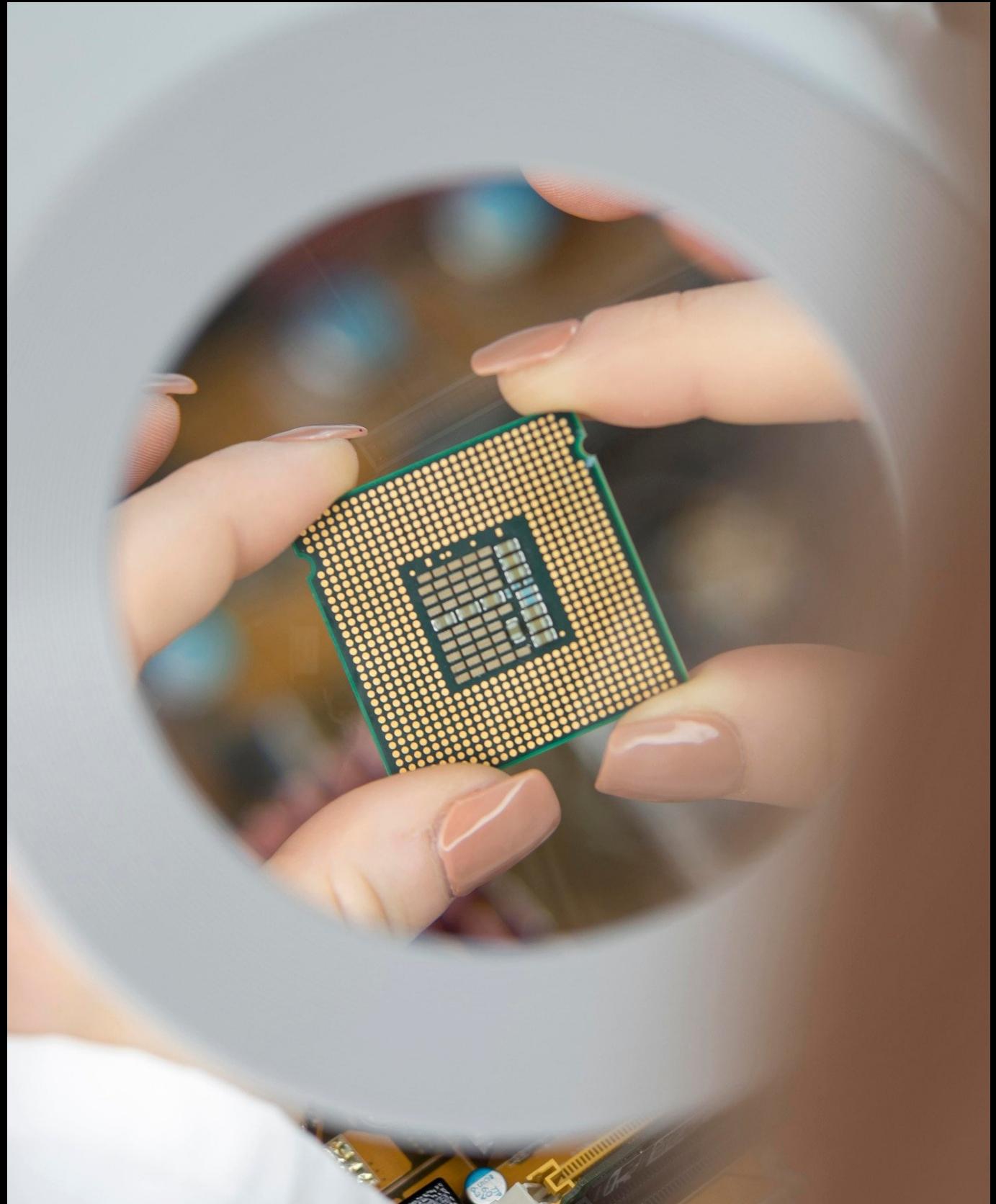


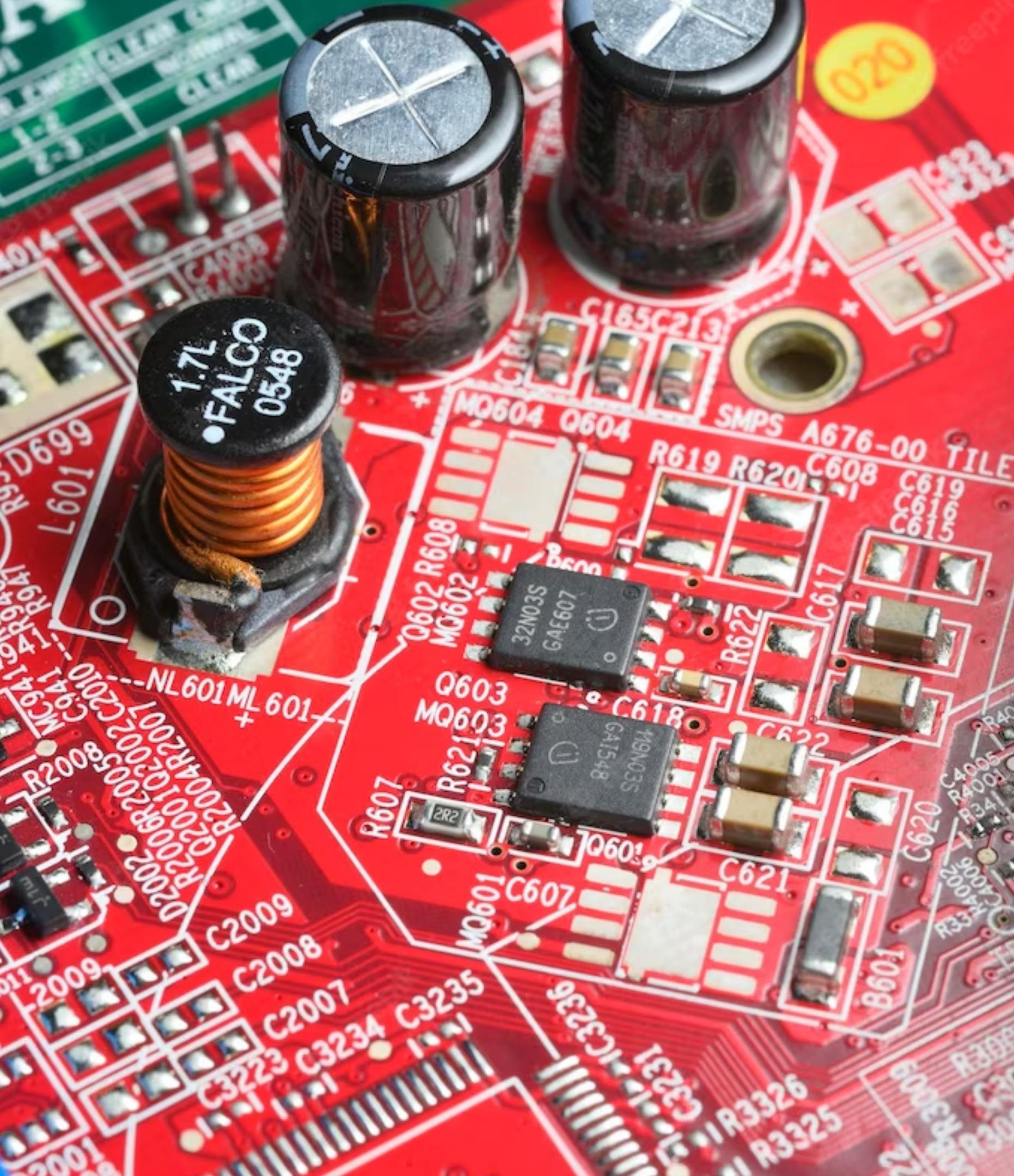
Introduction

Arduino is an open-source platform used for building electronics projects. It's based on a **microcontroller** board and allows users to create interactive objects with minimal coding knowledge. This presentation will cover the basics of using an Arduino board and how to get started with microcontrollers.

What is a Microcontroller?

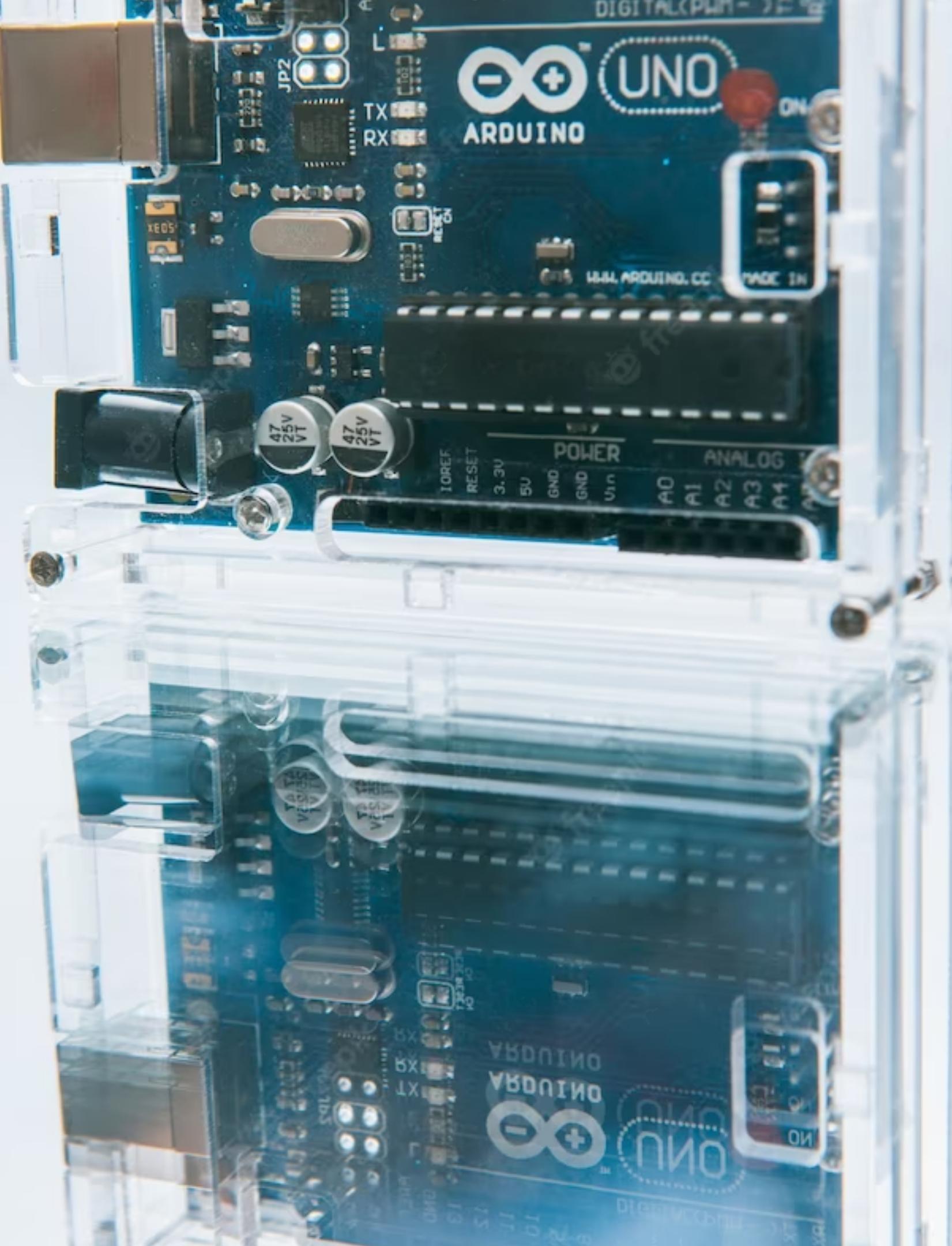
A **microcontroller** is a small computer on a single integrated circuit that's used to control electronic devices. It contains a **CPU, memory, and input/output** peripherals. Microcontrollers are commonly used in embedded systems, home appliances, and automotive applications.





Arduino Board Components

An Arduino board consists of a **microcontroller**, **digital input/output** pins, and **analog input/output** pins. The digital pins can be used for reading or writing digital signals, while the analog pins can read analog signals such as temperature or light intensity. The board also has a **USB** port for programming and power supply.



Programming an Arduino Board

Arduino programs, also called **sketches**, are written in **C++** language and can be uploaded to the board through the **Arduino Integrated Development Environment (IDE)**. The IDE has a user-friendly interface and provides various libraries and examples to simplify the coding process.



Arduino Projects

Arduino can be used to create a wide range of projects such as **robotics**, **home automation**, and **wearable technology**. The platform is highly customizable and can be expanded with various **shields** and components. Arduino has a large online community with numerous resources and tutorials available.

Conclusion

Arduino is a powerful and versatile platform for building electronic projects. It's easy to use and suitable for beginners and professionals alike. With its large community and abundant resources, the possibilities of what you can create with Arduino are endless.

Thanks!