# Writing Your First Function With GitHub Copilot

**To best understand the future of software development, try programming this factorial calculator with GitHub Copilot!**

In software development, there is a constant demand for the quick delivery of efficient code. With the recent creation of GitHub Copilot, a cutting-edge AI-driven coding assistant, developers can now code better innovations more easily and quickly than ever before. To show-off just how easy Copilot can make programming, this project will walk through crafting a factorial calculator. [Factorials](https://simple.wikipedia.org/wiki/Factorial) serve as a great example of a simple problem that has many applications in statistics and algorithm design, such as counting the many arrangements of a group of objects. Even if it has been decades since your last statistics class, this functionality can still be easily built by leaving the specifics of these mathematical properties to Copilot.

### Setting Up GitHub Copilot

Before diving into this new way of coding, it’s crucial to be properly set up. For an in-depth guide on setting up Visual Studio Code, we recommend reviewing our [GitHub Copilot setup article](https://www.codecademy.com/courses/intro-to-github-copilot/articles/setting-up-git-hub-copilot" \t "_blank). For those more familiar with the process, here is a high-level overview of what is needed to follow along with this project:

1. **GitHub Account:** If you don’t have one, sign up [here](https://github.com/" \t "_blank).
2. **GitHub Copilot Subscription:** Copilot requires a subscription to use. This can be purchased with the option of a free trial [here](https://github.com/features/copilot" \t "_blank).
3. **Visual Studio Code (VSCode):** While Copilot can work in a variety of code editors, it integrates best with VSCode. Download it [here](https://code.visualstudio.com/" \t "_blank).
4. **GitHub Copilot Extension:** Once you’re in VSCode, head over to the left extensions sidebar and search for “GitHub Copilot”. Install this official extension and log in to your GitHub account when prompted.