

First Assignment for Computational Physics

Xinyu Liu

September 9, 2024

1 My Github Account

My GitHub account is **rising1227**

2 Self-Introduction

I'm a first year undergraduate student at NYU physics department. Before coming here, I had my undergrad at Tsinghua University in China.

I've had some experience working on various programming languages(C++, python, Matlab, etc.), LaTeX and Github. During my undergraduate year, I've taken a course named big data in experimental physics where I learned essentially how experimentalists work. Also, I've conducted some theoretical research in hep-th and hep-ph which includes some application of solving PDE and ODE with programming languages.

When I go to the graduate school, my research interest move from pure theoretical work towards aspects more on the intersection of theory and experiments. That's why I joined professor Emily's research group. I guess that my goal for this course is to familiar myself better with programming language. For right now, I'd like to explore more on physics and I would be really happy if I can explore further on physics after I graduate.

3 Including Graphics

Here's the gaussian function that we've plotted with matplotlib¹. The normalized gaussian function is:

$$f(x) = \frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{1}{2}\left(\frac{x-\mu}{\sigma}\right)^2} \quad (1)$$

Table 1: Gaussian function with $\sigma = 3$ and $\mu = 0$

