

## **The final project for ESE5023 (Fall 2021)**

### **1. Goals**

The final project of ESE5023 is designed to be a capstone of the course. It is intended to be an original data analysis using real data (preferred from your research group), treating the problem in-depth, and presenting your results in a formal manner.

The topic should not be part of the student's research in the past. If you have problems in finding suitable topics, please contact the instructor before Dec. 01.

### **2. Requirements**

- a. Due to the large enrollment, students will be working in groups (2 students each group) in the final project.
- b. A science (or data-science) question should be clearly articulated, and then addressed using tools covered in this class.
- c. Excellence in data analyzing with Python or FORTRAN.
- d. Excellence in data visualization with Python or FORTRAN.
- e. The project contains two parts – a presentation and a report.

### **3. Presentation**

There will be two presentation sessions: Dec. 29 and Dec. 31. Each group will give a 10-minute presentation to the class, to be followed by a 3-minute discussion.

### **4. Report**

The primary product of the final project is a written report with a clear style. Please email your report to the instructor (zhul3@sustech.edu.cn) by Jan. 10, 2022, with the subject [ESE5023 2021 final report XXXX and YYYY], where XXXX and YYYY is the student ID.

In your report, we are looking for:

- a. A full bibliography and citations to data sources.
- b. Data sets used in the project (even if the data set is downloadable, the data set itself is required). Formats may be NetCDF, hdf, flat ascii, or csv.
- c. Python scripts and the environment file. The instructor and TAs should be able to reproduce your results by running the scripts.