

Carnegie Mellon

DSP

Electrical & Computer
ENGINEERING

Digital Signal Processing (18-491/18-691)
Spring Semester, 2022

PROCEDURES FOR SUBMITTING 18-491/691 HOMEWORK

INTRODUCTION

As you know, we have been using Gradescope for submitting 18-491/691 homework. The purpose of this memo is to give you more information about the procedures, along with information that we hope will be helpful in preparing your submissions.

HOW DO I SUBMIT?

Please follow the steps below:

- Complete your work for the problem set, observing the instructions for the MATLAB submissions below. In writing your solutions, be mindful of doing your work in a fashion that will be legible after scanning. We recommend black ink on white paper.
- **Scan your work** using your favorite IOS or Android application, or a conventional scanning device. I use the IOS TurboScan iPhone app, but it is not free. Free IOS apps that the TAs recommend include and Scanbot and CamScanner for IOS and Android. I recommend a black and white setting, although you are encouraged to do your own experiments with this. We will not grade your assignment unless it is sufficiently legible.
- Add the MATLAB component (see below) and combine the .pdf files for your regular solutions and MATLAB solutions.
- Upload your work to the Gradescope site and mark the pages that begin each new problem (no need to mark subparts). You can access the Gradescope site by clicking on “Gradescope” on Canvass, which is right below the tab for “Piazza.”
- After submitting your assignment on Gradescope, you should see a prompt that allows you to annotate pages as per the problem they correspond to.
- You should see a list of all problems on the assignment on a toolbar to the left.
 - Select the problem you want to assign pages to first.
 - Then select the pages which contain the solutions to that particular problem.
 - You can select multiple pages corresponding to the same problem.
 - You can also select the same page for multiple problems.

Note that if you are working close to a homework deadline, submit your work and add your page annotations later. You can annotate your work any time from when you submit until when we grade it.

- Here is the official Gradescope tutorial on how to upload assignments:

https://www.youtube.com/watch?v=KMPoby5g_nE

There are many other tutorials describing this process are on YouTube as well.

PREPARING MATLAB SUBMISSIONS

To facilitate grading of MATLAB problems, we are now asking that all MATLAB solutions be submitted in scanned printed form using the MATLAB `publish` feature.

Since at least some of you may not know how to use `Publish` (I didn't, either), here is how we would like you to do it ...

To publish `.pdf` inside MATLAB:

1. Go to the main script of your work.
2. Switch to the "Publish" tab in MATLAB.
3. Under "Publish", select "Edit Publishing Options".
4. Under "output settings", select "pdf" for the option "Output file format"
5. Click Publish.

A formatted PDF file will appear in the working directory.

Combining `.pdf` files.

At this point you will have a `.pdf` file scanned from your written-out work and a second `.pdf` file generated by MATLAB. You have a number of options to combine them into a single `.pdf` file, as a Google search on something like "merging pdf files" or "combining pdf files" will reveal. While some of these solutions involve expensive software like Adobe Acrobat (which I use for my own work), or downloading free software (which may bring along unwanted ads, toolbars, or other social diseases), there are also at least a few free safe approaches as well.

For example, on the Mac, you can use the Preview App to combine files. Open the files, select "Thumbnails" in the View menu, select everything on the side bar and copy. You can paste these pages into the thumbnails from the second file and save the merged file. For a more helpful description, see (for example)

<https://support.apple.com/en-us/HT202945>

On a computer using the Windows OS, you can use the Google Chrome browser to merge .pdf files. See, for example

<https://www.quora.com/How-do-I-combine-PDF-files-in-Chrome-1>

You can also find a discussion of other alternatives in

<https://www.howtogeek.com/216485/how-to-split-merge-reorder-mark-up-and-sign-pdf-files-on-windows/>

as well as a number of other places.

Submitting MATLAB code:

In addition to the printed listings and images that you will include with your regular submission, please submit your executable code in a single .zip file to the second assignment location labelled **PROBLEM SET X MATLAB**. We will run your code from the wrapper, which will contribute to your grade for the assignment.

COMMENTS?

Please post your comments and questions about submission procedures to Piazza.