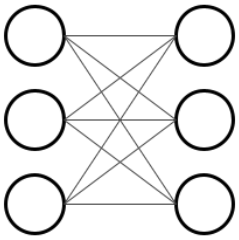
Contents

Print to PDF



DSCI 572
Supervised Learning II

Welcome to Supervised Learning II! In this course, we delve into the world of deep learning using Python and PyTorch. You'll learn about optimization, the fundamentals of neural networks, and convolutional neural networks. We'll also explore some advanced topics such as generative adversarial networks.

Important links

- Course Jupyter book
- Course GitHub page
- Slack Channel
- Canvas
- Gradescope
- iClicker Cloud Section 001
- iClicker Cloud Section 002

- Class + office hours calendar

Course learning outcomes

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Deliverables

▶ Click to expand!

Teaching Team

▶ Click to expand!

Lectures

Format

▶ Click to expand!

Lecture schedule

This course occurs during **Block 4** in the 2024/25 school year.

#	Topic	Resources and optional readings
1	Floating Point Errors	• Floating Point Arithmetic: Issues and Limitations
2	Optimization and Gradient Descent	
3	Stochastic Gradient Descent	
4	Introduction to Neural Networks & PyTorch	
5	Training Neural Networks	
6	Convolutional Neural Networks Part 1	• Stanford cs231 CNNs notes
7	Convolutional Neural Networks Part 2	
8	Advanced Deep Learning	

Installation

We are providing you with a `conda` environment file which is available here. You can download this file and create a conda environment for the course and activate it as follows.

```
conda env create -f env-dsci-572.yml
conda activate 572
```

We've only attempted to install this environment file on a few machines, and you may encounter issues with certain packages from the `yml` file when executing the commands above. This is not uncommon and may suggest that the specified package version is not yet available for your operating system via `conda`. When this occurs, you have a couple of options:

1. Modify the local version of the `yml` file to remove the line containing that package.
2. Create the environment without that package.

3. Activate the environment and install the package manually either with `conda install` or `pip install` in the environment.

Note that this is not a complete list of the packages we'll be using in the course and there might be a few packages you will be installing using `conda install` later in the course. But this is a good enough list to get you started.

Course communication

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Reference Material

▶ Click to expand!

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