## Richard Sowers. Professor, University of Illinois

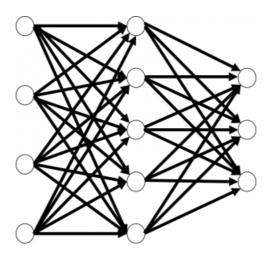


# IE 534/CS 547 FALL 2022

### IE 534 and CS 547 (Deep Learning)

Section D, ONL

CRN 70295, 72236, 77514, and 77532



- Instructor: Richard Sowers <r-sowers@illinois.edu>
- Home page: https://publish.illinois.edu/r-sowers/ (this syllabus can be found there).
- Class meets: 08:00AM 09:20AM TR on Zoom (see Canvas)
- Learning Management System: Canvas. Contains
  - Zoom link
  - · Names and email addresses of TA's
- Safety information: http://police.illinois.edu/emergency-preparedness/run-hide-fight/resources-for-instructors/
- Illini MediaSpace channel, containing
  - links to videos (synchronous and asynchronous)
  - links to Notes

### **Topics**

- Linear Regression
- Logistic Regression
- Elementary Logic
- Backpropagation
- FeedForward networks
- Gradient Descent
- · Testing, Validation and Training
- Feature Importance
- Dropout
- Batch Normalization
- Convolutional Neural Networks
- Recurrent Neural Networks
- Generative Adversarial Networks.

#### **Grading policy**

Final grades will be determined on the basis of the total numerical score (and will be curved).

Component	Weight
Hourly Exam (10/4)	15% of grade
Hourly Exam (11/15)	15% of grade
Quizzes, Projects, Homework	70% of grade

#### **Notes**

- Asynchronous notes will be made available on a module-by-module basis
- Random subsets of individual assignments will be graded.
- There will be a number of assignments involving data (and coding). Python (and Jupyter notebooks) will be the preferred framework for this (Python is one of the top languages for data analysis, so this is designed to be to your benefit). NB: Anaconda is one of the common distributions of Python.
- We will extensively use Google Drive and Google Colab and for teaching material and submission of coding projects. To get access to these, you need to have Account Status "On" for Google Apps at https://cloud-dashboard.illinois.edu/cbdash/ and then log in via g.illinois.edu
- Coding HW must be submitted by sending the TA's a link to a Google Colab notebook (and giving the TA's viewing permission).
- Many assignments will be group projects, with groups being set by Canvas
- All date-times will be in Champaign-Urbana
- All students are expected to abide by the Honor Code; you are here to learn (and my interest is in helping you do that).
- Disability requests should be routed through DRES <disability@uiuc.edu>
- Students who have suppressed their directory information pursuant to the Family Educational Rights and Privacy Act (FERPA) should self-identify to the instructor.
- Run-Hide-Fight emergency preparedness
- The technology of the course may evolve as the semester progresses and as I learn new tools. The content and goals will stay the same.