Lab 05: Compressive Sensing

Week 10 - COMP/ENGN8535 Engineering Data Analytics

College of Engineering, Computing and Cybernetics
Australian National University

May 7, 2023

Objectives

The objective of this lab is to practice implementing compressive sensing algorithms.

---

1 Getting Started

1. Fork the COMP/ENGN8535 Lab05 git repository by opening the following link in a web browser: `https://gitlab.cecs.anu.edu.au/u1120993/comp-engn-8535-2023-lab05`
2. Clone the repository you have forked by entering a line like the one below into your Git CMD window (after changing directories to where you want the repository created): `git clone https://gitlab.cecs.anu.edu.au/YOURUSERNAME/comp-engn-8535-2023-lab05.git`
3. Enter the username and password for your ANU CECS GitLab account and wait for the clone command to finish.
4. Change the directory into the git folder by typing `cd comp-engn-8535-2023-lab05`

2 Compressive Sensing

1. Using Jupyter Notebook, open the following file from your repository: `comp-engn-8535-2023-lab05/CompressiveSensing.ipynb`
2. Complete the activities in this notebook and run it. The Week 10 lecture will be particularly important in implementing these algorithms, along with the documentation for solving linear programs using Scipy found here: `https://docs.scipy.org/doc/scipy/reference/generated/scipy.optimize.linprog.html`

3 End of Lab

Don't forget to commit and push your changes back to GitLab using the git commands you learnt in Week 2.