

# Digital Signal Processing

## Applications of Digital Signal Processing

# Applications of Digital Signal Processing

- ▶ Signal filtering (e.g. images)
  - ▶ denoising (remove noise)
  - ▶ inpainting (fill in missing parts)
  - ▶ improve quality
- ▶ Image compression - the DCT transform
- ▶ MP3 compression - subband coding
- ▶ Control theory
  - ▶ e.g. controlling a motor to a target speed profile, in various conditions
    - ▶ PID controller
- ▶ Convolutional neural networks
- ▶ Classification problems
  - ▶ feature extraction of features
  - ▶ classification of features