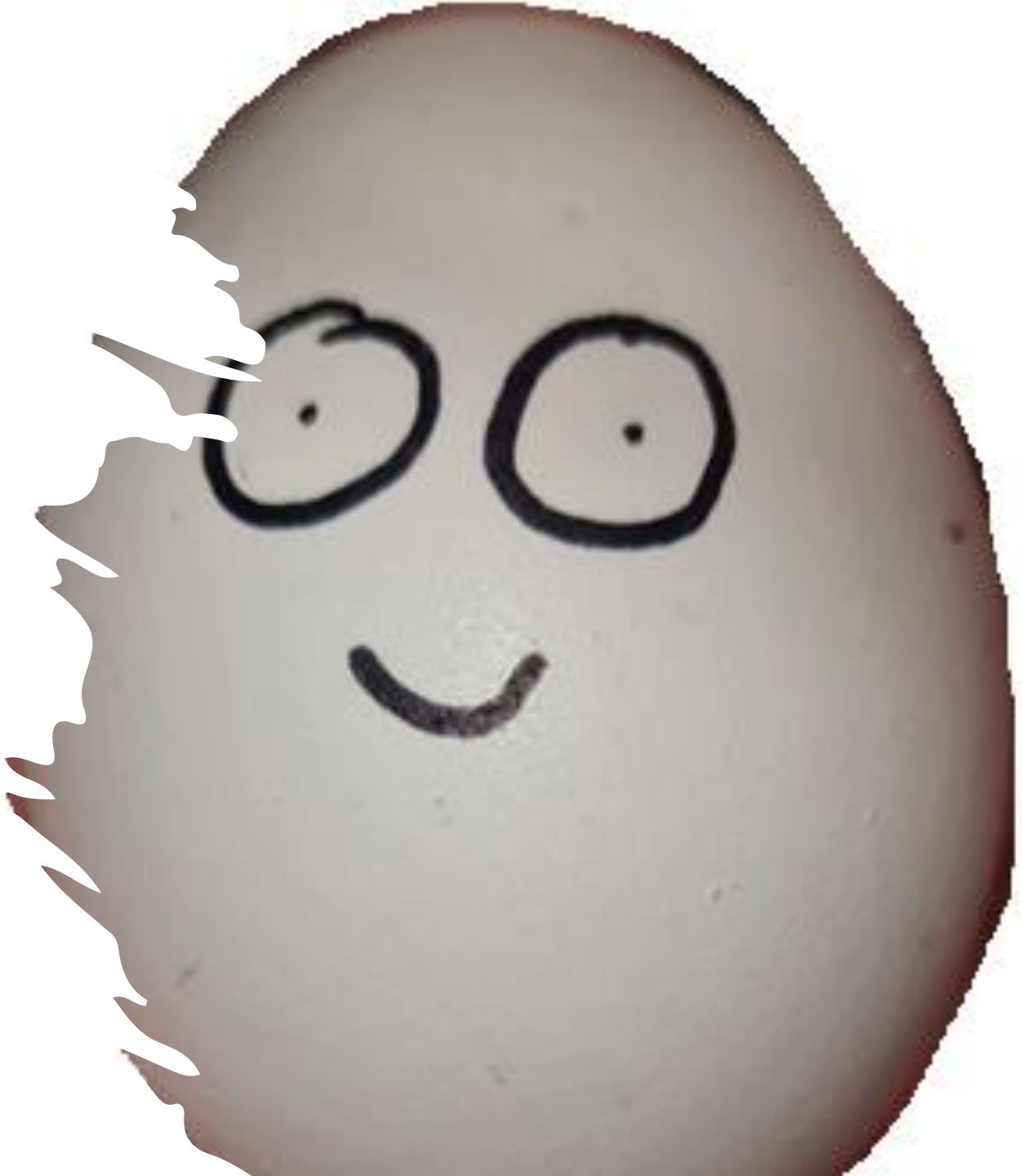
Hvordan Gruppe 42 ødela egg

Hva har vi gjort

- Forskjellige ideer til plattform
- Systemidentifikasjon
- Gjettet verdier

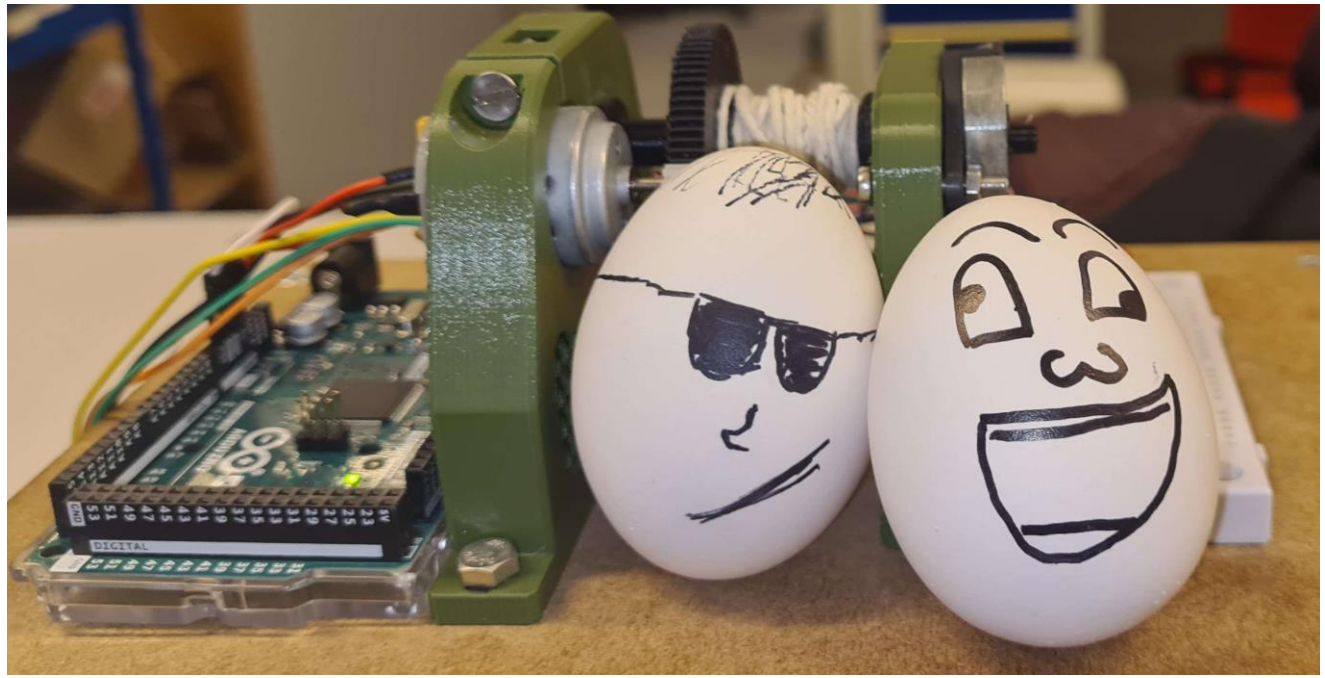


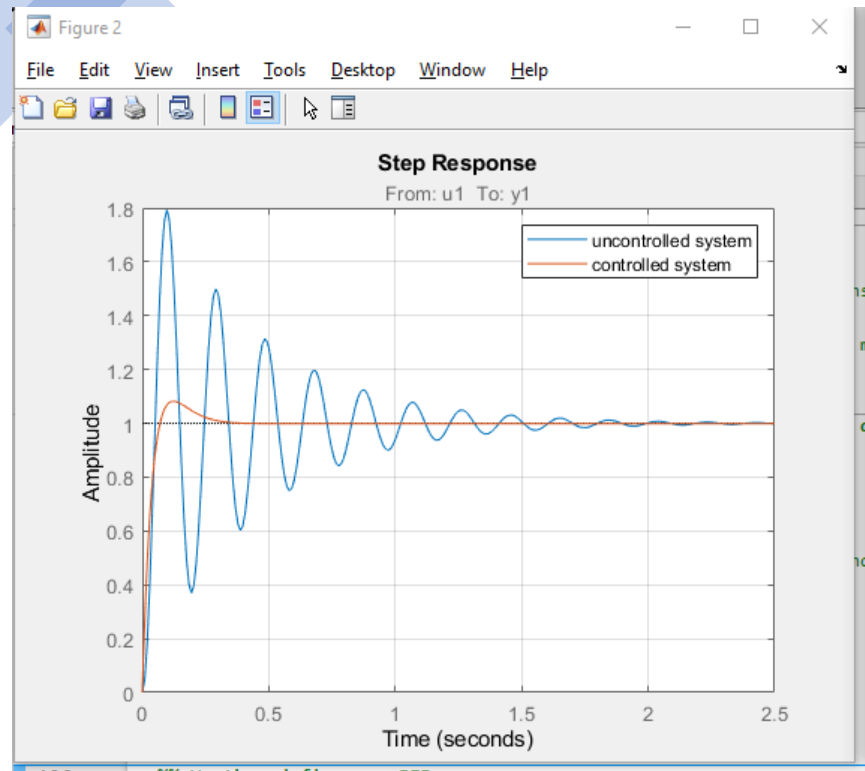
Vanskeligheter under prosjektet

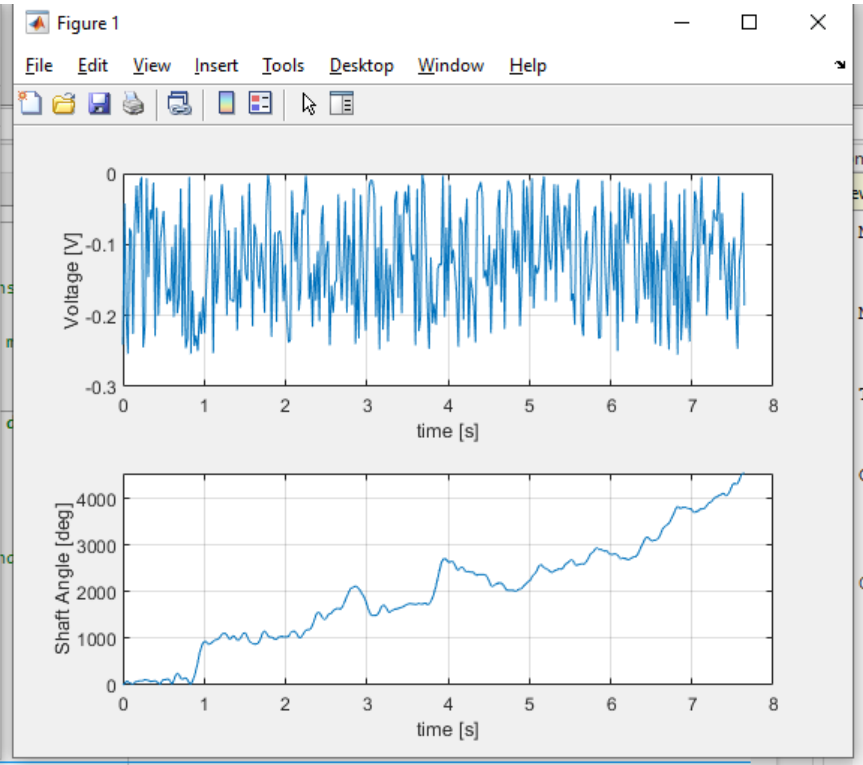
- Knytte egg holder
- Motor driver
- Enkoder
- For stramme fjærer
- Systemidentifikasjon

Systemidentifikasjon

- Forskjellige forsøk for å samle data
- 2 ordens system
- Simulering og praktisk forsøk








```
%% We then define our PID

Kp = 0.35;     %Proportional
Kd = 0.03;     %Differential
Ki = 0.005;     %Integral

% Our control transfer function is
Gc = pid(Kp, Ki, Kd);

% And we can define our controlled system
Mc = feedback(Gc*Gp, H);

step(Mc)
grid on
legend('uncontrolled system' ,'controlled system')
```

```
mmand Window
ew to MATLAB? See resources for Getting Started.

Maximum sample time [ms]:
   21.4120

Minimum sample time [ms]:
   20.7160

The average sample time is [ms]
   21.0647

Our sampling time is, Ts [sec]
    0.0210


Gp =

  From input "u1" to output "y1":
          1052
  ---------------------
  s^2 + 4.753 s + 0.501

Continuous-time identified transfer functior

Parameterization:
   Number of poles: 2   Number of zeros: 0
   Number of free coefficients: 3
   Use "tfdata", "getpvec", "getcov" for par

Status:
Estimated using TFEST on time domain data "I
Fit to estimation data: -31.66%
FPE: 2.305e+06, MSE: 2.242e+06
>>
```