



STEP 1:

RUN IN FOR LOOP UNTIL FULL
COST VEC IS MADE

WHERE

$$J = \int_0^{t_f} x^T Q x + u^T R u \, dt$$

STEP 2:

ORDER J LOW TO HIGH
↳ SORT IPOP ACCORDINGLY

$$\text{FITNESS} = \frac{\sum_{i=1}^{\text{POPSIZE}} J_i}{J_i}$$

THIS PRIORITIZES SMALLER VALUES
OF J

THIS BUILDS THE FITNESS VEC

FITNESS

PERCENT

F_1

F_1 / F_{TOT}

F_2

⇒

F_2 / F_{TOT}

⋮

⋮

F_i

F_i / F_{TOT}