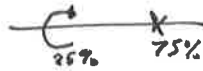


Common Problems with HW3

- Wrong V_Γ ($V_{\Gamma_{20}} \neq \frac{1}{2\pi} \frac{\Gamma}{x-x'}$)

- Wrong Collocation pt (boundary)



- Normals point outward or inward $|\hat{n}| = 1$

- Loops + Functions

Decompose and separate computations

Loops are powerful; please don't hand code.

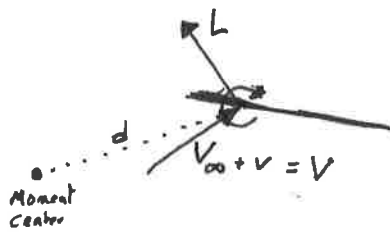
- C_p is not easy/feasible with this discrete vortex solver. Skip.

Why?



- Lift is $\rho V \Gamma$, thus $C_L = \frac{\rho V \Gamma}{\frac{1}{2} \rho V_\infty^2}$ if $V=1$ then $C_L = 2\Gamma$

- Each panel also has a lift $L_i = \rho V_i \Gamma_i$



$$L = \rho V_i \Gamma_i$$

$$M = L \times d = \rho V_i \Gamma_i \times d$$

$$V(x_i) = V_{\Gamma_1} + V_{\Gamma_2} + V_{\Gamma_{\dots}} + V_{\Gamma_N} + V_\infty$$

↑ remove V_{Γ_i}