Pitching Moment for a general body of revolution:

$$M_f = rV^2 a_f \left(Volume_f \right)$$

$$C_{m_f} = \frac{M_f}{\frac{1}{2} rV^2 S\bar{c}}$$

$$C_{m_f} = \frac{2a_f \left(Volume_f \right)}{S\bar{c}}$$

$$Volume_f = \frac{p}{4} \int_0^{l_f} w_f^2 \, dx$$

$$Volume_f \approx \frac{p}{4} \sum_{i=1}^{n} w_{f_i}^2 \Delta x_i$$

$$C_{m_f} = \frac{p}{2} \frac{a_f}{S\bar{c}} \sum_{i=1}^{n} w_{f_i}^2 \Delta x_i \ \ (a_f \text{ is in radians})$$

$$C_{m_f} = \frac{p}{2} \frac{p}{180} \frac{a_f}{S\bar{c}} \sum_{i=1}^{n} w_{f_i}^2 \Delta x_i \ \ (a_f \text{ is in degrees})$$

$$C_{m_f} = \frac{1}{36.5} \frac{a_f}{S\bar{c}} \sum_{i=1}^{n} w_{f_i}^2 \Delta x_i \ \ (a_f \text{ is in degrees})$$

Where

$Volume_f$ = Volume of the body

M_f = Pitching Momemt

C_{m_f} = Pitching Moment Coefficient

r = Density

V = Velocity

S = Reference Area

$\bar{c}$ = Wing Mean Geometric Chord

a_f = Angle of attack of the body

w_{f_i} = Fuselage segment width

Δx_i = Fuselage segment length