*In Work;* **Completed**

Regen Analysis Framework:

1. Determine Major Input Parameters
   1. Chamber Parameters (Given Pc, properties, Geometry)
      1. Should all be input
   2. Hot Side Wall Temp (Give Explicitely)
   3. Coolant Choice & Property Data (Function to grab Jet-A Props at given P&T)
   4. Material Properties (Give explicitly)
   5. Coolant Inlet Pressure & Temp (Give as Inputs, Perhaps Solve for later)
2. Define Channel Geometry (Do in function, generate data vector for geometry)
   1. Number of Channels
   2. Width, Depth, Corresponding Land
   3. Variance Along Nozzle
3. *Determine Gas Side Convective Coefficient (Relatively Easy Function)*
   1. *Use Bartz Correlation*
4. Characterize Coolant Behavior
   1. Iterate Along Nozzle Stations
      1. Tcw Around Channel
         1. Need to use conductive relations for heatmap in channel
      2. Coolant Thermodynamic Data
      3. Coolant Side Convective Coefficient
         1. Use Nusselt Number Correlations
      4. Coolant Reynolds Number
      5. Coolant Pressure Drop
      6. Coolant Heat Pickup
5. Output
   1. Coolant Properties Along Contour
   2. Coolant Outlet Pressure and Temperature