**Project Summary**

**Project Objective:**

Design and analyze feasibility of blinds that behave autonomously with lowest possible environmental footprint. Windows alloy natural light into a building but also let in heat. Autonomous blinds should be designed to open, letting in light, during cooler times and close, blocking heat, during hotter times.

The materials used for the frame, covering and hinges are to be chosen based on required properties of each and such that cost and environmental footprint are minimal.

The use of autonomous blinds should minimize energy required to cool a room.

Analysis of feasibility should include: thermal analysis, cost analysis and life cycle analysis

**Design concept:**

Vertically collapsible square frames with bi-material or shape memory material, that are reactive to heat, as actuating hinges and with an appropriate covering to block heat.

**Constraints:**

Minimal to no human intervention required.

Minimal to know electrical/mechanical mechanisms