ELOISA BAEZ JONES

MECHANICAL ENGINEERING PORTFOLIO

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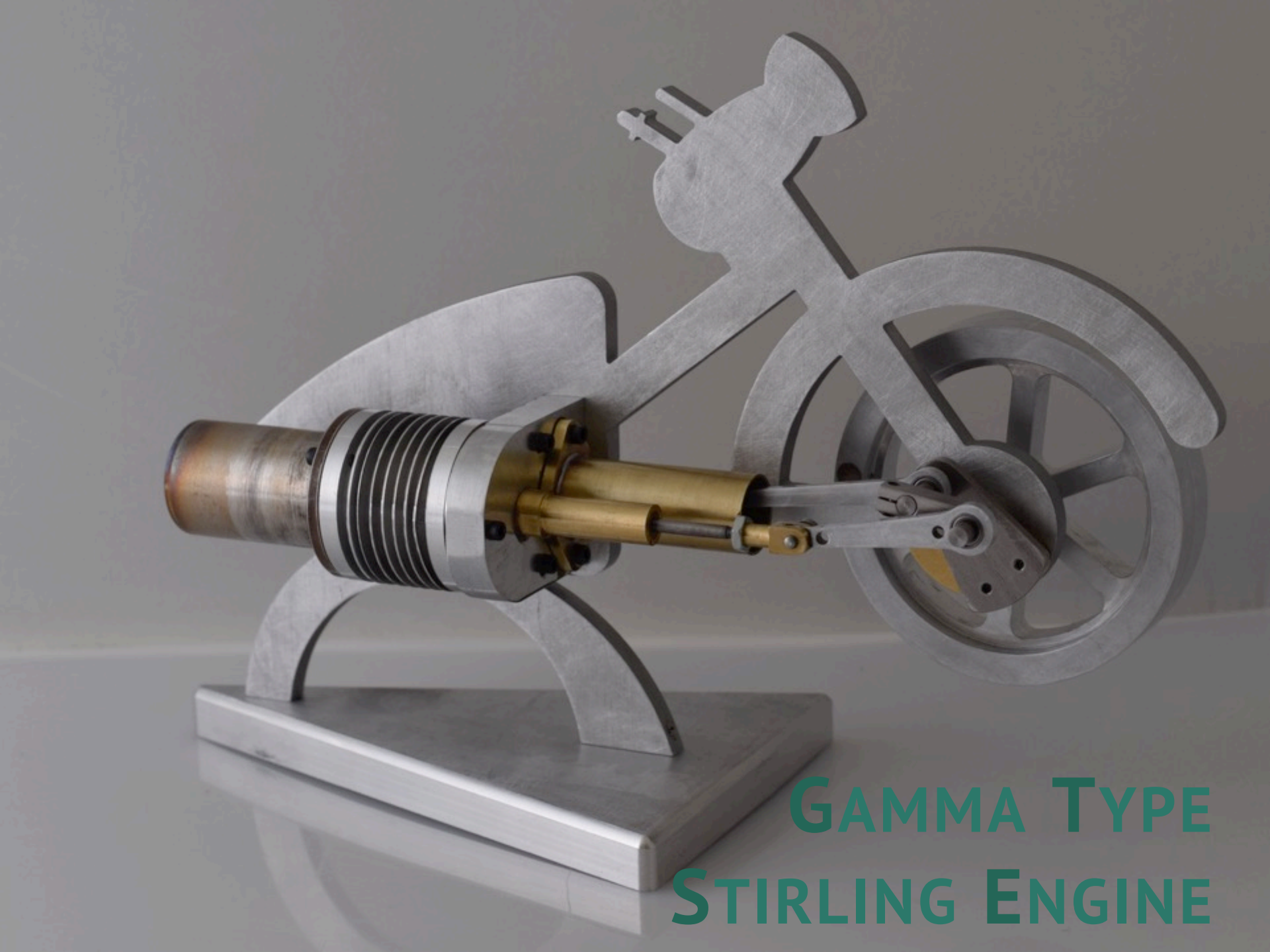


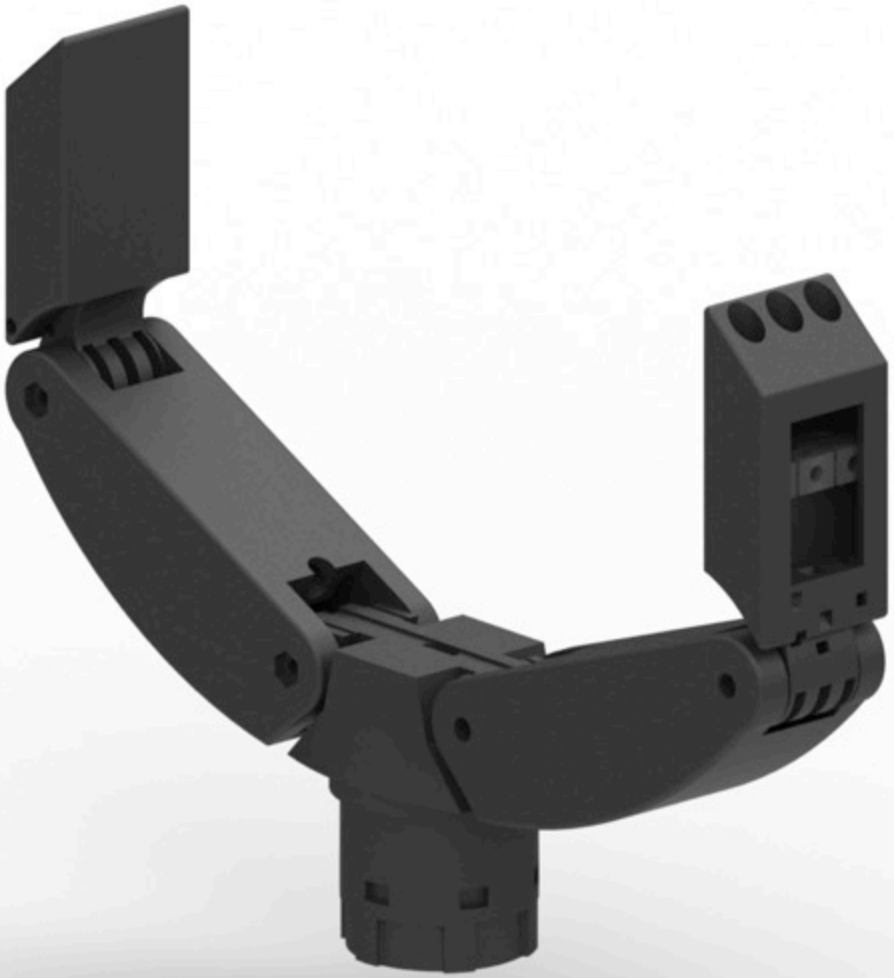
Gamma Type Stirling Engine

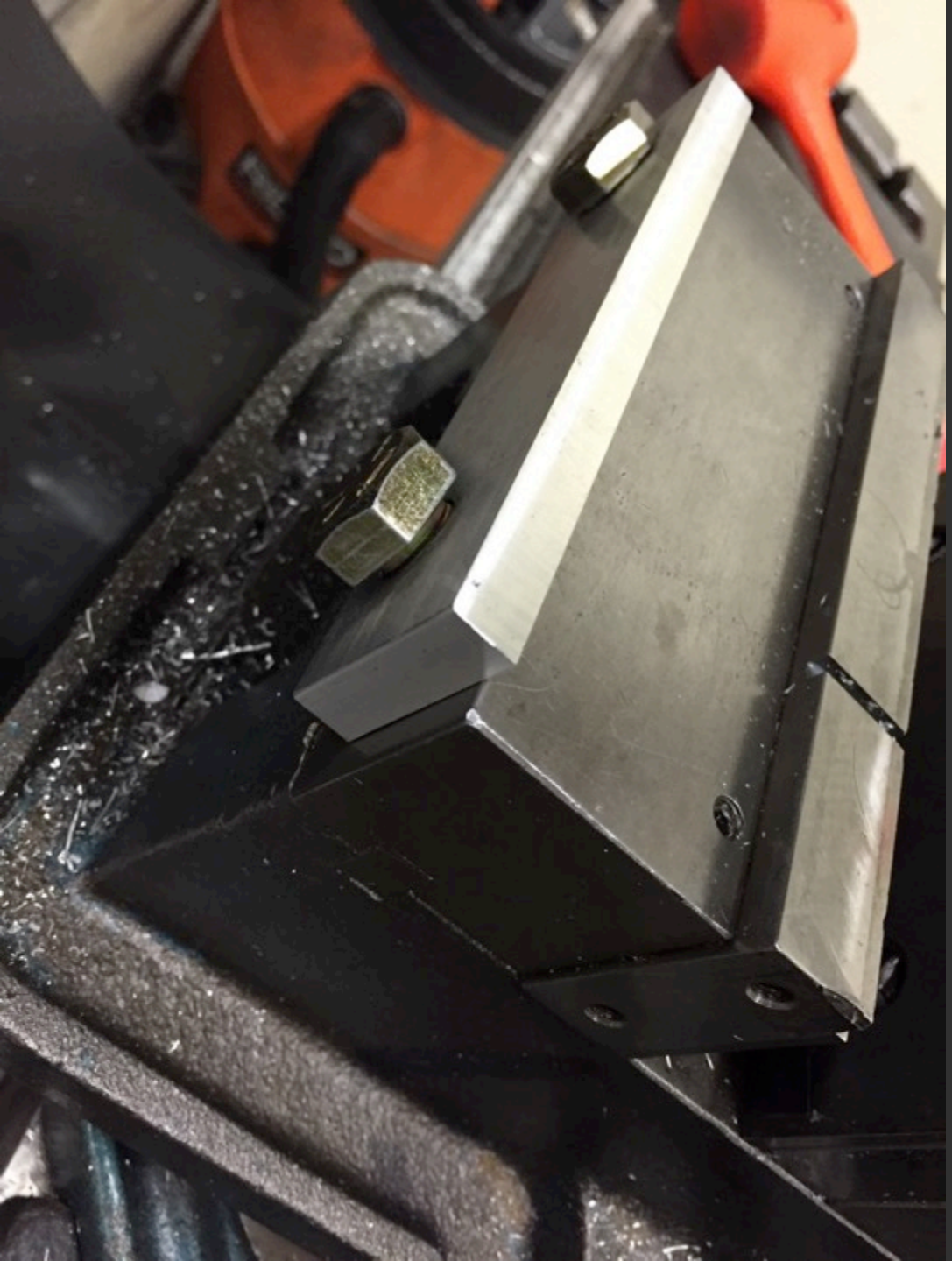
This Stirling Engine was manufactured over the course of a semester using manual mills, manual lathes, and hybrid CNC mills. We were responsible for the design of the flywheel assembly, bed and baseplate. Parts were machined out of aluminum, steel, and brass.


My engine ran at just over
1100 RPM.

VELO GRIPPER

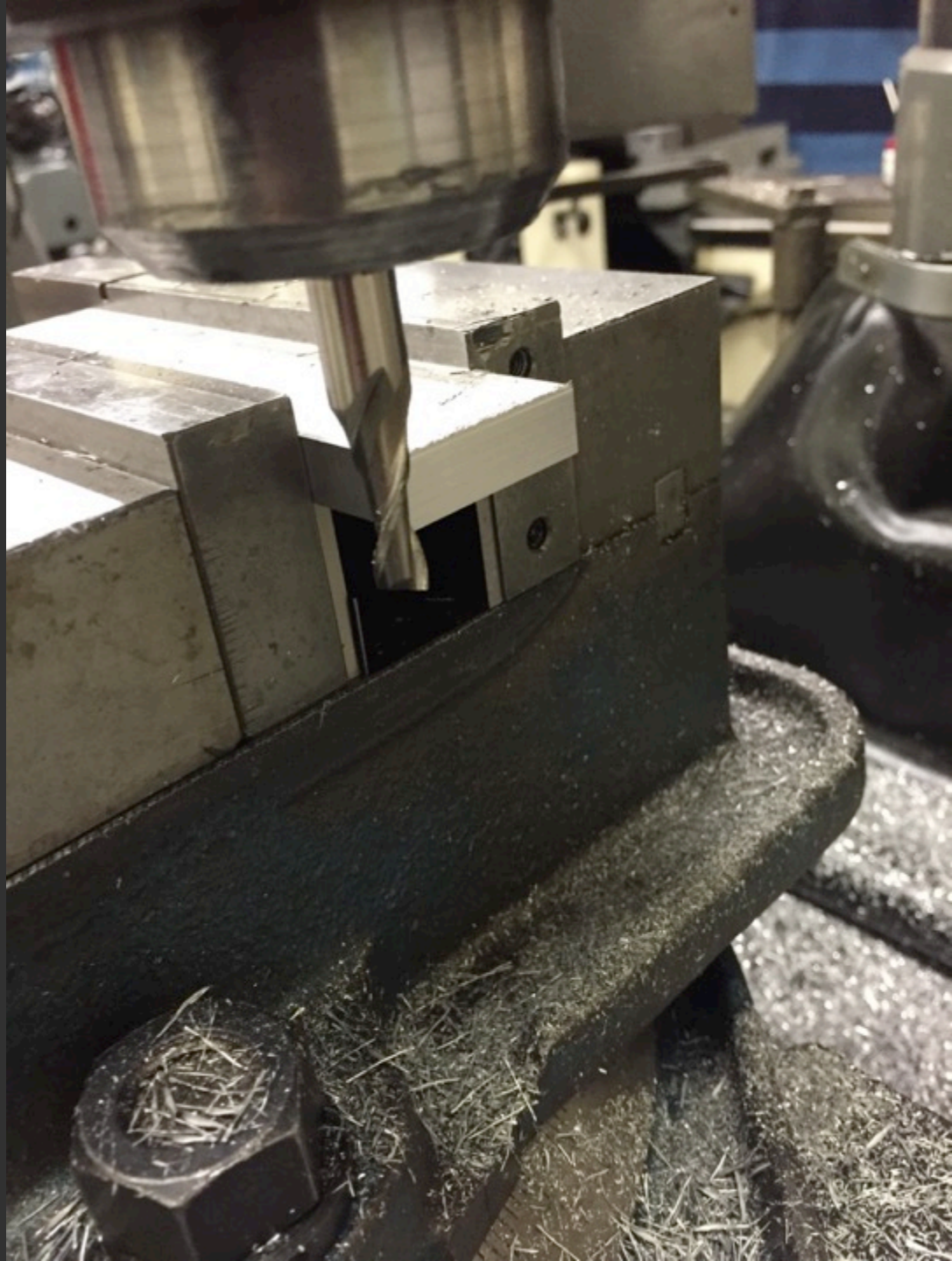
This is a parallel axis gripper for a robotic arm. As a part of a team, I helped reverse engineer this gripper over the summer. We created Solidworks parts and used 3D printing to create them. This project taught me a lot about prototyping in a way to help you debug your project. After quite a few models of the gripper, we arrived at a working version at the end of the summer.





This is the first part of a vise stop I designed and machined. The vise stop attaches onto the stationary jaw of the vise as pictured. Another piece attaches onto this piece, and a steel rod comes through to create the perpendicular face. The advantage of this vise stop is that the rod is low-profile so that the vise stop can be left on during machining.

This vise stop was machined out of aluminum on a manual mill after being fully designed in Solidworks. The vise stop was created in 48 hours as a time trial.



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