Project Title:	Automated Shaft Lead Measurement Device
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Area:	Mechanical Engineering
Sponsor:	Trelleborg Sealing Solutions

Trelleborg Sealing Solutions R&D would like a device to automate the process of measuring shaft lead. Shaft lead is created during the turning process in manufacturing the shaft, creating helical machine mark patterns which cause the shaft to behave like a screw, diminishing seal performance. For seals to function properly, the shaft lead (expressed as an angle) must be below a given test specification. TSS is currently capable of measuring the shaft lead angle but would like to automate and streamline the current method. Shaft lead is currently measured by placing a string with a weight onto a shaft, rotating the shaft, and tracking the distance the string moves. TSS would like to automate this process by having a standalone tabletop unit that can automatically measure the shaft lead and display the measured value. The machine should operate automatically after an operator initiates the start of the process. The lead angle measured should be displayed. The budget set for this project is $3000.