CIS PA 1

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Summary
This report is for programming assignment 1 basic transformations and pivot calibration, containing following parts,

* Mathematical Approach and Algorithm
* Programming Structure
* Validation and Results
* Discussion
* Summary of Unknown Data

The folder contains following subfolders and Matlab files,

* PA1 - Essential Matlab functions
  - registration.m: 3D point set to 3D point set registration
  - c_expected_value.m: compute C expected value by composition rule
  - em_pivot_calibration.m: determine EM pivot position relative to EM tracker
  - opt_pivot_calibration.m: determine OPT pivot position relative to EM tracker
* PA12-StudentData - Data for PA1
* parse - Matlab functions for parsing data files
  - parseCALBODY.m
  - parseCALREADINGS.m
  - parseEMPIVOT.m
  - parseOPTPIVOT.m
  - parseOUTPUT_1.m
* pa1output - Output data derived by PA1
* pa1driver.m - driver script for PA1 and leads to pa1output files
* pa1validation.m - Matlab script for validation and error analysis