

Benjamin Curtis

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EDUCATION	University of Michigan Bachelor of Science in Mechanical Engineering, May 2020 Minor in Statistics	Ann Arbor, MI
SKILLS	Design & Modeling: SolidWorks, HyperWorks, MSC ADAMS Fabrication: Mill, Lathe, Soldering, 3D Printing Programming & Data: R, MATLAB, Python, SQL, C++, Java	
PROJECTS	University of Michigan – Automated Ball Sorting Arm Competition 2 nd Place out of 40 Teams <ul style="list-style-type: none">Selected target for sorting arm that created higher possible points in competition as well as creating higher demand for precision and resulting in a higher quality robotLed team on performing critical control system analysis for PID controller ensuring robotic arm's behavior created desired response when presented with specific external stimuliCreated four-bar linkage unit model in SolidWorks using mechanical design principals resulting in a design that efficiently met project requirements including having zero inflection points throughout the systems range of motionModeled four-bar linkage system in MSC ADAMS to evaluate performance using the mechanical advantage at various pre-established points throughout system range of motion including the minimum and the maximum resulting in high level of force with low variance University of Michigan – FIFA International Soccer Match Analysis <ul style="list-style-type: none">Analyzed scores of FIFA international soccer matches between 1872 and 2019 using dplyr package to clean and wrangle data in R calculating various metrics including average goals per game and average goal difference per game resulting in a fully reproducible analysisVisualized average goals per game using ggplot2 package in R showing that the changing of the back-pass rule in 1992 temporarily reversed the continuous year-over-year decline in goals per game Personal Project – Risk Battle Simulator - https://github.com/bacurtis9 <ul style="list-style-type: none">Identified opportunity to eliminate wasted time rolling dice in Risk board gameFormulated and coded dynamic Risk battle simulator in PythonDesigned text-based user interface for easy interaction with simulator	
EXPERIENCE	Bob's Discount Furniture Product Support Associate <ul style="list-style-type: none">Manage space in backroom to ensure that all trucks can be unloaded in an efficient mannerAssemble beds, chairs, and tables to allow customers to examine and test furniture before purchase U.S. Environmental Protection Agency Engineering Project Consultant <ul style="list-style-type: none">Designed device to read telematic data from vehicles On-Board Diagnostic (OBD) port during emissions testing of new OEM vehicles decreasing the possibility of manufacturers getting away with using cheat devices and evading environmental regulationsCreated live data stream by wirelessly transmitting OBD data from reading device to laptop giving EPA agents a real time window into on-board vehicle computer behavior allowing quick adjustments to be made during emissions testing resulting in reduced resources used on conducting faulty trials Walmart Produce Associate <ul style="list-style-type: none">Managed space in storage room to ensure everything was easily accessible and there was space for new fresh produce to minimize inventory cost	Novi, MI May 2019 - Present Ann Arbor, MI January 2020 - May 2020 Novi, MI November 2014 - August 2018
LEADERSHIP	Escher CO-OP Suite Manager <ul style="list-style-type: none">Matched 16 suite members with tasks based on preference and ability to ensure a productive suiteResponsible for fining suite members to ensure tasks got done well in a timely mannerUsed personable techniques to ensure tasks were completed with 100% compliance and without the need to fine any suite members	Ann Arbor, MI October 2019 – May 2020