# Grattan Rowland IV

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## EDUCATION

**Michigan State University,** East Lansing, MI
*Bachelor of Science, Major in Applied and Computational Mathematics* December 2020
*Minor in Computer Science Engineering*

## WORK EXPERIENCE

**MSU National Superconducting Cyclotron Laboratory & Facility for Rare Isotope Beams,** East Lansing, MI
*Student Technical Assistant I* December 2017 – Present

- Collaborated efficiently with engineers to construct and test software and hardware control systems.
- Built and implemented components for a particle accelerator.
- Fabricated devices to an engineering standard to be capable of withstanding -200 °C in cryogenic chambers or vacuums within gas chambers.
- Demonstrated safety techniques around radioactive waste and hazardous materials. Exhibited practice of 4S safety regulations and lockout/tagout.
- Assembled over 200 separate power supplies, switches, and other mechanisms and electronics for superconducting magnets.
- Designed, developed, and tested covers and enclosures for dangerously high voltage and current applications.

**IOvAGE,** Brighton, MI
*IT Technician* October 2015 – August 2016

- Optimized software and hardware to improve performance and output of network and CNC Mills.
- Constructed servers and synthesized multiple networks.
- Configured wiring and software setup of network infrastructure, mapping, and CCTV feeds.
- Visualized and designed layouts for enclosures and infrastructure mappings with CAD.
- Repaired over 100 CNC Mills and their respective computer hardware.

## PROJECTS

**Michigan State University,** East Lansing, MI
*Tower Defense Game* September 2020 – October 2020

- Lead a team of 5 through the design, development, and implementation of a windows MFC application using Agile methodologies.
- Followed sprint-based workflow method, scheduled two meetings per sprint, with two sprints per week.
- Designed UML in Visual Paradigm for application, divided tasks among teammates, and used Git for version control.

**British Petroleum Company PLC,** East Lansing, MI
*Whiting Steam Production Facility Analysis* March 2016 – May 2016

- Ascertained production outputs of steam for a BP power facility to measure cost effectiveness.
- Wrote and compiled MATLAB functions and scripts to analyze production output efficiently.
- Reported all findings in a formal report involving outputs and code used to analyze data.

## SKILLS & RELEVANT COURSEWORK

**Languages:** English & German.
**Technical Skills:** C++, Python, C, Object-Oriented Program Design, Visual Paradigm, Git, Agile, SCRUM, SDLC, MATLAB, Simulink, VHDL, PSpice, MathStudio, Wolfram Mathematica, AutoCAD, Revit, & Inventor.
**Relevant Coursework:** Discrete Mathematics, Algorithms & Data Structures, Linear & Abstract Algebra, Digital & Predicate Logic, Ordinary & Partial Differential Equations, Machine Learning, Numerical & Data Analysis, & Object-Oriented Programming.