

# SHASHWAT MAHARJAN, E.I.T.

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## EDUCATION

<b>Masters of Engineering</b>	Central Michigan University	GPA: 3.84	May 2024
<b>Bachelors of Mechanical Engineering</b>	Central Michigan University	GPA: 3.85	2018 - 2022

## SKILLS

**Modeling:** SolidWorks, Fusion 360, NX Siemens, Ansys, Computer Numerical Control (CNC), and Volsung.

**Technical:** Data Engineering, Economic Analysis, Fluid Mechanics, Machine Design, and Thermodynamics.

**Programming:** Python, Julia, MATLAB, SQL, Linux, TensorFlow, PyTorch, LabView, and FANUC Robot Controls.

## PROFESSIONAL EXPERIENCE

**Geothermal Research Intern** July 2023 - May 2024  
Geologica Geothermal Group *San Diego, CA*

- Streamlining Volsung automation for enhanced workflow, enabling efficient parametric studies and data generation.
- Developing a machine learning approach to estimate static formation temperature (SFT) in a geothermal reservoir.
- Transforming conventional methods for estimating SFT using physics-informed machine learning.

**Computational Research Assistant** August 2020 - May 2024  
Central Michigan University *Mount Pleasant, MI*

- Spearheaded the development of a foundational machine learning hub.
- Utilized Finite Element Methods to model and Machine Learning to tackle Solid Mechanics problems.
- Reduced the computational cost of five research problems, post training, from days to 1 second.

**Neuroscience Research Intern** May 2022 - Aug 2022  
Brown University *Providence, RI*

- Reduction in data-analysis time by 80% for electrophysiology recordings for pre-frontal cortex in mice.
- Established reproducible data-analysis pipelines using DeepLabCut to track animal pose.
- Maintained descriptive programming workflow documentation, ensuring user-friendly implementation.

## CERTIFICATIONS

- Passed the Fundamentals of Engineering (FE) Exam issued by the board of Michigan PE.
- FANUC Handling Tool Operation and Programming Software in Robotics Control from FANUC America.

## PROJECTS

**Precision CNC Machining and Engraving Project** May 2022  
Completed a precision CNC machining and engraving project, following Titans of CNC tutorials to master the use of drills, lathes, and CNC machines, culminating in the production of intricately engraved components.

**Prototype for Foreign Metal Detection in Trees** May 2022  
Prototyped a metal-detector to prevent foreign-metallic objects destroying Bandit Industries \$500,000 machines.

**Automated LEGO Sorting System** May 2021  
Led the design and implementation of an Automated LEGO Sorting System, integrating a motorized lazy Susan with color sensors and Arduino control, achieving over 98% sorting accuracy.

## AWARDS

- National Science Foundation and Department Of Energy awarded \$110,000 for research internship at Geologica.
- Selected mentee of **Google** Computer Science Research Mentorship Program.
- **Outstanding Undergraduate Student of the Year 2022** from Engineering Society of Detroit.
- **Undergraduate President's Award** for research at Central Michigan University.