Santhosh Kumar Muruganantham

(516) 336-7453 | smuruga2@rockets.utoledo.edu

SKILLS

Portfolio Website:	https://s09kumar.github.io/Portfolio.github.io/
Language:	Python (Pandas, NumPy, SciPy, MatPlotLib), C++, Visual Basic programming
Tools:	Power BI, Excel (VLookup, Conditional Formatting, Pivot Tables, Macros), MATLAB, Tableau.
Database:	SQL (SQL Server)
Robotics:	Arduino, ROS (Robot operating system), Gazebo
CAD:	Certified SolidWorks Professional (CSWP), Autodesk Inventor, AutoCAD

EDUCATION

MS in Mechanical Engineering- *Mechanics and Design* *May 2023*
The University of Toledo, Ohio, GPA: 3.73

BS in Mechanical Engineering Technology *May 2019*
The State University Of New York, Farmingdale, GPA: 3.67

WORK EXPERIENCE

Bare Analytics **Toledo, OH**
BI Developer *July 2024 - Present*

- Developed Power BI dashboards for RLI Forecasting to monitor labor hours, project forecasting, and job performance, enabling data-driven operational and financial decisions.
- Designed the GEM Fabshop Manpower Dashboard, visualizing manpower efficiency by analyzing jobs and drilling down to the cost code level, enabling intuitive workforce planning and resource allocation.
- Built a DevOps Lifecycle Report to track work items across sprints, visualizing task completion rates and team progress in Azure DevOps.
- Engineered robust data models and applied Power Query and DAX transformations to ensure report accuracy, performance, and ease of use.
- Automated weekly data extraction and transformation for GEM Fabshop using Power Automate, reducing manual effort and saving over 300 hours annually.
- Automated underperforming project reporting for GEM Service via Power Automate, enabling leadership to access more real-time insights and saving over 240 hours annually in manual effort.
- Integrated data from on-premise IBM SQL servers into Power BI through reusable dataflows, centralizing analytics and enhancing data reliability.
- Supported Agile collaboration and version-controlled deployment using Azure DevOps and CI/CD pipelines to support structured and scalable report development.

The University of Toledo **Toledo, OH**
Data Analytics Research Assistant *Sep 2023 – June 2023*

- Involved in projects concerning predictive analysis for parameters in Additive Manufacturing processes, as well as a project centered around Natural Language Processing (NLP) tasks including Sentiment Analysis, Topic Modeling, and Next-Word Prediction.
- Developed a Python-based PDF query chatbot that streamlines information retrieval from documents, enabling efficient data extraction and natural language interaction with textual resources.
- Utilized NLP libraries and techniques including LangChain, Transformers, Chroma for embedding, vector storage, training the model, and data query.
- Designed an intuitive and user-friendly chatbot interface for seamless interaction using Streamlit.

The University of Toledo **Toledo, OH**
Graduate Research and Teaching Assistant *Jan 2021 - Dec 2022*

- Created a virtual robot model in a simulation environment by defining its velocity controllers and transmission types, and using GPS, compass, and sonar controllers for robot description and movement.
- Utilized Python scripts to create a swarm coordinator that publishes and subscribes to coordinates using the msg type format (urdf, launch, yaml, rviz).
- Designed assignments, created solutions, and assessed exams, resulting in improved class performance across courses such as DAMS, Strength of Materials, Vibrations Lab, and Manufacturing Processes.

Schneider Electric **East Haven, CT**
Mechanical Engineer Trainee *Oct 2019 - March 2020*

- Utilized VBA (Visual Basic for Applications) to design a user-friendly calculator GUI within an Excel spreadsheet, facilitating the sizing of breakers for I-line distribution panels.
- Worked in the Engineering department in modeling and drafting parts (using CREO 3D software) for the UL-891 low-voltage switchboards which includes various sheet metal components, copper bus bars and Glastics as per ASME Y14.5.
- Collaborated with quality engineers to validate the dimensions of manufactured copper bus bars, sheet metal components, and wiring, ensuring alignment with engineering specifications.

The State University of New York **Farmingdale, NY**
Math Tutor & Building Manager *Sept 2018 - May 2019*

INTERNSHIP

Ashok Leyland (Automobile Industry), Hosur, India *May 2017 - July 2017*

- Contributed to quality inspections of a wide range of automotive components, including ball bearings, cylinders, and pistons, employing precision instruments like gauges, calipers, dial indicators, and various measurement tools.

Indian Railway-Southern Division, Erode, India *May 2016 - July 2016*

- Participated in the examination of engine components via Liquid Penetration testing and validating the results with the aid of precision gauges.