

*Willing to relocate

GOWTHAM SENTHILKUMAR

| Tacoma, WA – 98402*

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Industrial Engineer pioneering data-driven and machine learning based approaches for process optimization, driving operational excellence across manufacturing. Proven experience applying Six Sigma, Lean, DOE, and automation to streamline workflows, reduce waste, and enhance productivity, especially in human-centric systems.

EDUCATION

University of Wisconsin – Madison

Madison, WI

M.S. - Industrial Engineering: Systems Engineering and Analytics | GPA: 3.86/4.0

May 2023

- Coursework Focus: Machine Learning, Optimization, Industrial Data Analytics, Simulation Modelling

Vellore Institute of Technology

Vellore, India

B. Tech. – Mechanical Engineering | GPA: 3.7/4.0

June 2020

- Coursework Focus: Operations Research, Statistical Quality Control

EXPERIENCE

GDB International, Inc. | Industrial Engineer

Aug 2023 – Present

- Optimized cellular manufacturing layouts and streamlined processes through Lean/Kaizen principles, time studies and 5S practices at a paint recycling plant, improving production throughput by 50%, and creating avenues for investment in automation by reducing labor costs.

Godrej Storage Solutions | Project Trainee/Intern

Jun – Jul 2019 & Dec 2019 – Feb 2020

- Conducted root cause analysis using Design of Experiments (DOE) and ANOVA, identifying an 85% influence of an interaction effect, which caused ~1mm (6.25%) error.
- Collaborated with the Quality Control department in a 6 - member team to benchmark analytical framework for online process optimization.

Wisconsin Union | Student Supervisor – Badger Market in Engineering

Jan 2022 – May 2023

- Direction of 5-7 student workers to implement streamlined processes for inventory management and customer service, improving sales by 15%, heightening overall team performance and customer satisfaction.

RESEARCH

FEAP Lab – University of Wisconsin, Madison

Feb – Aug 2023

- **Surface Anomaly Detection from 3D point cloud data** | Python, TensorFlow, Finalist - DAIS Best Student Paper Competition (2023), IISE annual conference.
- **Classification of Pavement Defects using Deep Learning** | Python, Keras, Revo Studio
Classification of two types of surface level defects in pavements, utilizing high-dimensional point cloud representations, for targeted additive manufacturing-based repair and restoration.

Academic Research

- **Predicting the 2022 FIFA Men's and 2023 FIFA Women's World Cups** | Python, SciKit-Learn, Jupyter
Forecast of the world's biggest sporting spectacles by engineering temporal performance metrics of teams and anticipating outcomes using ensembles with 80% accuracy, easily outperforming ranking-based predictions.
- **Impact of natural/man-made calamities on expenditure in food supply chain** | Tableau, MS Excel
Investigation of a \$50 Billion drop-off in expenditure due to the 2008 economic recession and contrasting it to the impact of the COVID-19 pandemic, through time series and regression analysis.

CERTIFICATIONS

Machine Learning & Data Analysis with Python | CSWA in Mechanical Design | RCRA Identifying Hazardous Wastes

SKILLS

Analytics & Simulation: Python, MATLAB, Julia, R Studio, MS Excel, Tableau, MiniTab, Arena, SolidWorks

Python & ML: Pandas, Matplotlib, SciKit-Learn, TensorFlow, Data Mining, Logistic Regression, Ensembles, CNN