

# WOOSTER

**Applied Methods and Research Experience** 

HOME



# Industrial Pump and Equipment Corp. Jorge Quinteros '25, Jungho Park '26, Precious Njeck '23, Torence Mwindaare '25 Advised by: Dr. Michael Bush & Dr. Nathan Sommer

We developed a web application for IPEC to document the repair services they offer and to automate the generation of service reports for their clients.

## **OVERVIEW**

INDUSTRIAL PUMP AND EQUIPMENT

IPEC is a company that distributes and services industrial pumps.

- They were faced with two major challenges:
- Manually organizing files for over 1000 clients

• Manually generating repair service reports Our solution was a web application that includes a frontend website and a backend database, designed to align with IPEC's typical repair service workflow. This software allows IPEC to document essential information in the database and automate the generation of service reports for their clients

# EXPERIENCE

- The project was an impactful learning experience for our team. We had to navigate complex requirements and implement creative and practical solutions, enhancing our technical and problem-solving skills.
- Coordinating tasks and integrating different components of the project required strong team communication and project management. This helped us improve our teamwork and project execution abilities.
- Engaging with IPEC's team to gather requirements, provide updates, and receive feedback was invaluable. It taught us the importance of professionalism, clear communication and responsiveness to client needs.
- Seeing the tangible benefits of our work—such as

Service Cases					+ New Case	
Status: All 🗸				Search cases	Search	
Case Number	Case Title	Customer Name	Date Created $\lor$	Est. Completion Date	Status	
CN00053	result	Rivera-Burnett	2024-05-03	2003-10-04	Completed	
CN00028	strategy	Gardner LLC	2023-06-26	2023-12-04	Ongoing	
CN00049	fortune	Rivera-Burnett	2022-10-05	1973-01-10	Completed	
CN00040	mood	Johnson-Rich	2022-06-26	1998-03-31	Completed	
CN00007	attitude	Lee Inc	2022-04-17	2008-01-08	Cancelled	
CN00047	taste	Johnson-Rich	2022-03-17	1981-05-09	Completed	
CN00023	marketing	Gardner LLC	2017-03-27	1976-10-27	Ongoing	
CN00002	Sample Pump Rebuild Report	Wong, White and Schmitt	2016-11-10	2017-02-09	Completed	

#### CLIENT

Our client, Industrial Pump and Equipment Corp (IPEC), was founded in 1952 in Ohio. They serve as a distributor and an authorized service center for pumps utilized in the concrete, oil & gas, chemical, and petrochemical industries. IPEC is an Authorized Service Center for Milton Roy and Sundyne, and offers maintenance, service, and repairs for under equipment that are covered the manufacturer's warranty.

increased efficiency and automation of reports for IPEC—was immensely satisfying. It reinforced the positive impact that well-designed software can have on a client's operations.





#### CONCLUSION

By the end of AMRE, our team was able to:

- Develop a web application to document the pump repair process and automate service report generation.
- Deploy the software on IPEC's local network
- Establish a robust database system to document crucial operational data.
- Create documentation for users, future developers, and system administrators

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