

To Whom It May Concern:

Subject: Internship of Hugo Oliveira Lamounier
Energy Monitoring System Project

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Hugo Oliveira Lamounier completed an internship project at the Illinois Institute of Technology in Chicago, Illinois, during the summer of 2015.

Hugo was part of a seven person team who researched, designed and developed an Energy Monitoring System for the Facilities Department at Loyola University Chicago. The team worked full time over an eight week period to accomplish the following.

Utilizing existing spreadsheets that record energy consumption data for all Loyola University buildings, determine a methodology for data entry, data recall, graphic interface and predictive analysis.

Perform site visits to determine the exact location of all metering devices and record their serial numbers and active or inactive status.

Develop a graphic interface that illustrates the geographic layout of the Loyola Lakeshore campus with all building footprints identified. Create interactive layers of additional graphic information available upon mouse click. Information such as exterior building images, meter images, energy use bar charts, links to modified energy spreadsheets, future data entry screens, interconnected boiler and chiller systems and location of all electric buildings were included.

Development of a manual for the operation, updating and data entry processes built into the Energy Monitoring System.

The entire team worked together throughout the summer to accomplish the goals of this project. The team presented their work to the clients at Loyola University and again during the Illinois Institute of Technology, Inter-professional Projects presentation (IPRO Day). The team was judged by Loyola University staff and professionals from the Chicago Area. The Energy Monitoring Team won first place among all Energy Track participants. Teams were judged on their work effort, the final Energy Monitoring System design, posters used to illustrate their work and their ability to describe individual and team accomplishments.

Hugo worked on many aspects of the project throughout the summer. In particular, Hugo created the web based energy dashboard for the Loyola University Chicago energy monitoring system. Hugo's ability, knowledge, intelligence and his persistence in completing the energy monitoring system were critical to the success of the entire team.

It was a pleasure to work with Hugo on this project. We may be continuing on to the development phase of the energy monitoring system next summer. It will be interesting to see how Hugo's initial system design will progress as we refine the system and add data.

Nancy Hamill Governale

Overall Grade: 9.5 out of 10. Work quality was excellent. Blended well into the USA design/thinking process.