

Lucid Design Group Internship

Sam Hummel
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Background:

When Duke builds new facilities, we choose high performance machinery and designs and we monitor carefully in order to optimize them. However, if the building occupants practice habits that are not optimal, the full potential of our product and design decisions will never be achieved. Duke is aiming to go beyond building machinery optimization to “occupant performance optimization.” Duke recognizes that perhaps the most important element of the building that needs to be monitored and optimized is occupant building-use habits. In partnership with Lucid Design Group, Pratt School of Engineering students and faculty have designed a comprehensive Occupant Performance Optimization System (OPOS).

Project Description:

The intern will be working closely with Pratt, Facilities Management and Lucid Design Group to implement the OPOS. The project will involve three major areas of work:

Developing the website which will display the real-time building performance data:

- Design “the look” of the site (working with Pratt’s web designer)
- Develop the non-data content (text and images)
- Layout where and how the graphs and gauges will be plugged into the site
- Set up a server space for the site

Generate graphs and gauges:

- Work with faculty and staff to prioritize the data points to be developed into gauges first
- Work with Lucid, Facilities Management and Pratt IT staff to set up the server that will grab and render the real-time data into gauges

Making the Kiosk display:

- Work with faculty and staff to prioritize graphs and gauges
- Decide what information should be presented
- Develop narrative
- Determine if flash modules can be added to the plasma screens

If time allows:

- Research additional sensors that may be of value to faculty, students and environmental performance benchmarking
- Research what it would take to get the historical webcam time-lapse data of CIEMAS into the site
- Research what it would take to set up a webcam above the coal pile at the steam plant
- Research v2.0 trend charting using database
- Design the functions and user interface for a “web bug” application

Eligibility: Must be a Pratt School of Engineering student.

Skills:

- Strong engineering background
- Web design experience (Dreamweaver)
- Graphic design knowledge
- Good communication skills for approaching faculty and staff
- An interest in using real-time data to inspire behavior change
- Bonus Skill: controls experience

Compensation & Reporting:

The intern will work 40 hours a week for 12 weeks and be paid \$5,500. The intern will be supervised by David Schaad, Assistant Dean of Civil and Environmental Engineering in Pratt, and Sam Hummel, the Environmental Sustainability Coordinator.

Interested parties should submit a resume and cover letter to Dr. David Schaad as soon as possible. Send e-mail to: dschaad@pratt.duke.edu