California State University San Bernardino
School of Computer Science and Engineering

CSE 595 Independent Study Presentation

Date

Thursday, March 17, 2016

Time

4:30 PM

Place

Jack Brown Hall, Room 358

Title

Library Occupancy App: Measuring the Real Time Occupancy in the Pfau
Library

Student

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Advisor

Dr. Concepcion

Abstract

The Library Occupancy app was started in Spring 2015 in CSE 455 with me as
the project manager and Dr. Sudhakar, VP ITS, as the client. During that time,
a network-enabled device using Arduino IR sensors was developed including an
Android application and an online database. This Winter 2016, I joined the
team in CSE 455 that continues the project with a new client, Dr. Caballero,
Dean of Library. I provided the consultancy and advisement to the team as they
work with technologies such as: Arduino, C++, Java, PHP, and MySQL. The
current project uses 2 sets of Arduino IR-sensor devices for use in two of the
main entrances (north and south) of the library, the Android application was
improved to display historical occupancy information, and a manual occupancy
reset control was created for the database. Future improvements may include:
RF communication to a central hub, more robust database control,
error-correcting occupancy tracking, and better cost effeciency.