Smart UV Disinfectant

Nicole Baldy Contributions

Nicole's primary responsibility was the control subsystem – this includes the microcontroller and its interactions and control of all sensors and actuators. She designed and implemented the primary state machine which ensured that sensors were checked and the data processed correctly according to the overall device state. She also implemented the software interface between the microcontroller and the Grid-EYE sensor which was used to accurately detect the presence of a human from their body temperature. Nicole also served a secondary role as an "integrations specialist"; thanks to her co-op experience in robotics, she provided expertise in planning the subsystems around integration. For example, user input was first simulated using a button on the microcontroller, which was later replaced by a signal from the phone application.

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Luke Rogers Contributions

Luke's primary responsibility was the user interface subsystem – this includes the UART communication between the microcontroller and the Bluetooth board, the Android phone application, and the data sent between the microcontroller and the subsystem. He designed and implemented the phone application and provided the software interface to the Bluetooth chip for the microcontroller, which made integration with the user interface subsystem extremely simple. Luke also served a secondary role as the "mechanical specialist"; thanks to his experience in mechanical systems from the Formula Combustion Design Team, Luke planned and provided the locker support beams and motor mount among other small mechanical needs.