Kyle Andrew Rector

KyleARector@outlook.com
KyleARector.com

Technical Skills

Programming Languages
- Python, C++, C#, VB, HTML, CSS, JavaScript

Technologies
- Linux, Redis, .NET Frameworks 3.5 and 4.5, SQL Server, OpenCV, Keras, TensorFlow

Experience

Development Engineer   **January 2016 – Current**
CreateAbility Concepts, Inc, Carmel, Indiana
- Created rehabilitation exercise adherence tracking software in C#.NET, utilizing the Microsoft Kinect SDK. A suite of supporting applications was developed around this, including a WebGL based viewer for physical therapists to review client's exercise sessions in 3D.

- Designed and developed code for an interface to control a commercial microwave via WiFi. The microwave is also controllable via Amazon Echo via a software bridge running on Raspberry Pi and custom Alexa Skill.

- For a NIDLRR grant, developed an application to non-invasively monitor a home by evaluating amount of water, electricity, and internet usage using commercially available sensors. The software attributes amounts of usage to different devices and services by learning profiles for devices, such as hair dryers, and services, like Netflix.

Manufacturing and Process Engineer   **July 2015 – January 2016**
Applied Composites Engineering, Indianapolis, Indiana
- Gathered customer requirements for custom composite tooling and OEM parts. Designed tools and parts using CATIA V5, and coordinated with procurement specialists to obtain necessary materials.

PLM Analyst and Applications Developer   **May 2013 – July 2015**
Gulfstream Aerospace Corporation, Savannah, Georgia
- Conceptualized, developed, and implemented a desktop database management application in VB.NET for the creation and edition of aircraft architectural geometry. This application allows the rapid rough definition of new aircraft models and systems, allowing much more time for iterative CAD design on finer details.

- Designed and delivered CAD model templates to tooling group for MOF/MOD composite molds. The templates decreased the design time from 55 hours per tool to 5 hours, saving $316,800 in a year.

Education

Purdue University, West Lafayette, IN   **May 2013**
- Bachelor of Science in Computer Graphics Technology

Independent Coursework

Udacity   **Expected January 2018**
- Self-Driving Car Engineer Nanodegree

Additional Projects

Wi-Fi Controlled Curtains
- Visualized and designed a set of 3D printable modules to add to existing curtain rods to open and close curtains upon receiving commands via Wi-Fi. This module was integrated into a home automation set up and works with Amazon Echo through a software bridge running on a Raspberry Pi.

Wireless Gesture Controlled Door Lock
- Designed an Arduino based device to fit on existing deadbolt locks, and to be opened via Bluetooth with a MYO gesture armband. Demonstration video available at https://www.youtube.com/watch?v=56N3QiX7IQU