



KYLE EDELMANN

ENGINEER | BSCEN



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LinkedIn / user / Profile



DFW, Texas, United States

EDUCATION



ABOUT

Hands-on Engineer with a Passion for All stages of Product Development. With just five years' worth of experience RTC Manufacturing has put a great deal of faith into me, and I have used the opportunity to prove myself a capable engineer. From research and development, to computing architectural design, to project management, to pure invention, my current position incorporates them all.

SOFT SKILLS

- HONESTY
- ACCURACY
- CRITICAL THINKING / OBSERVATION
- STORYTELLING
- NEGOTIATION
- ADAPTABILITY / FLEXIBILITY
- RESOURCEFULNESS
- PROBLEM SOLVING
- PATIENCE

EXPERIENCE

📅 Jan 2017 - Current

RTC Manufacturing

VICE PRESIDENT OF ENGINEERING

- Designed new embedded systems and improved existing designs dating back to 1980 using MICROCHIP advanced 8-bit MCUs.
- Developed and validated new embedded signal processing algorithms and firmware modules in C++ for PIC18F4620 and PIC18F26K22, enabling new data analysis on industrial IoT 4G sensors and scheduling capability for Real-Time Clocks.
- Developed WinForms services with C# in MVS for connecting field units to cloud servers through TCP/IP and 4G LTE data network using XML / SOAP, ATT, and private MVNOs.
- Managed existing Windows Servers to host SQL databases, web-hosted end user applications, WinForms Services, and Webmail.
- Managed existing SQL databases for hosting remotely collected data online.
- Developed client-hosted WinForms applications for end users to manage and operate field units and database information.
- Developed web-hosted ASP.Net applications for end users to manage and operate field units and database information.
- Integrated third party RADAR technology into proprietary embedded systems.
- Integrated third party 4-20mA technology into proprietary embedded systems.

SOFT SKILLS CONT.

- ACTIVE LISTENING
- VERBAL COMMUNICATION
- VISUAL COMMUNICATION
- RESEARCH
- TROUBLESHOOTING
- DELEGATION
- PROVIDING CLEAR FEEDBACK
- PROFESSIONALISM

EXPERIENCE CONT.



May 2016 - Dec 2016

RTC Manufacturing

INTERNSHIP

- Designed new embedded system using PIC18F26K22 to interface with third party Power Management System and intelligently monitor and report recorded conditions.
- Developed power integration algorithms in C++ using MPLAB X for firmware to remotely report abnormal electrical conditions in field units.
- Helped write and oversee unit testing for completed system.
- Helped write NEMA and FCC testing procedures for NEMA TS-2 and FCC Section 15.B Certifications.
- Oversaw deployment of first 600+ units in the city of Indianapolis, IN by connecting teams of city workers and independent contractors.
- Provided technical support and drafted power study of problematic units for the city of Indianapolis, IN following initial launch of fully installed network.



May 2015 - May 2016

TrafficNet LLC

JUNIOR DEVELOPER

- Worked with a student team to design a new embedded system using Raspberry Pi 3 Model B, Raspberry Pi Camera Module, and servo motors + drivers to produce a user controlled low-cost, low-power weather resistant camera.
- Worked with a student team to develop servo driver control software in Python with Raspbian to provide 270 degrees of motion for increased viewing angle.
- Worked with a student team to develop a web-hosted ASP.Net application for controlling camera motors through TCP/IP and streaming live video.

ADDTL EDUCATION

 June 2011 - May 2012

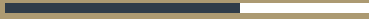
DCCCD

ASSOCIATES IN COMPUTER SCIENCE

<https://www.dallascollege.edu/>

HARD SKILLS

SQL



WINDOWS SERVER MANAGEMENT



MICROSOFT VISUAL STUDIO



MPLAB X



ASP.NET / JAVASCRIPT / HTML



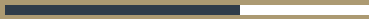
C / C++ / C#



XML / SOAP



MICROCHIP IN-CIRCUIT DEBUGGING



CELLULAR RADIO COMMAND LINE



MULTIMETERS



POWER SUPPLIES



OSCILLOSCOPES




HAND AND REFLOW SOLDERING



ANALOG AND DIGITAL SENSORS




NOTABLE PROJECTS

 January 2017


The Guardian : Intelligent Monitoring System

The RTC Guardian series is a line of embedded systems based around the MICROCHIP PIC18F26K22. They are designed to be put into traffic cabinets between the power source and the critical components so that they can record data about the electrical health of the system and report problems remotely via text and email notifications. [Click to see the Guardian Series Brochure](#)

 July 2018


Rtc-connect.com

My company's flagship web-hosted application. Rtc-connect.com is an ASP.Net application that provides a GUI for end users to monitor and actively manage their traffic control equipment from an internet browser anywhere in the world. It connects agencies to their fleet of field-deployed units from the internet, through the 4G LTE network. [Click to view rtc-connect.com](#)

 June 2018

RTC Connect

My company's flagship client-hosted application. RTC Connect is a WinForms application that provides a GUI for end users to monitor and actively manage their traffic control equipment in the same way the web-hosted application does, with the added advantage of being able to penetrate the application layer and access client-side ports like USB and UART for making direct connections to local units in the field. It securely connects clients to a cloud database by exclusively using XML encrypted SOAP web services. [Click to see download page for RTC Connect](#)

 February 2019

The Driver Feedback System : Intelligent Monitoring and Traffic Statistics

The RTC DFS is a system that integrates the Houston Radar SS400 and it's features into the above mentioned products to create an all-in-one turnkey IoT solution for end users that provides intelligent monitoring, traffic statistic gathering, and remote management in one autonomous device. It incorporates all of my acquired skills. Requiring the merging of the RTC cloud servers I manage, the SQL database I oversee, the WinForms services that handle TCP/IP communications, the 4G LTE data network, the field-deployed embedded systems I design, and the web-hosted or client-hosted fleet management software I supply. [Click to see the Driver Feedback System Brochure](#)