

CHRISTIAN B KYTE

Austin, Texas | 614.506.2705 | christian@ckyte.com

Professional Summary

Skilled Software & Systems Control Engineer with over 8 years of experience in Industrial Integration and Automation utilizing full stack development including web, application, backend, APIs, and Real-Time Logic while performing functional, unit, and integration tests to ensure high functionality and robustness, in a variety of industries. Extensive experience in all aspects of proprietary control platforms, data collection engines, and custom design SCADA systems. Continually exceeds expectations by building strong relationships and works well with people at all levels of the organization, including stakeholders, customers, and team members.

Project Accomplishments

Closed Loop Weigh Fill System

Integration of ultra-high-speed high-resolution weigh cells and material feeders in efforts to achieve tight tolerances and great precision. Designed all proprietary code, and algorithms for FillPRO inc flexible use from a single station expanding up to multi-Beckhoff controller systems with 48+ stations. Currently in production in over 100 custom automation systems.

Proprietary Beckhoff Data API

Solely designed and maintained a C# Beckhoff Data Engine to read and write real time data to and from multiple controllers. Latency under 1ms, auto discovery, supports primitive and complex structures, remote or local controller controllers. Custom installer and auto-updater implemented using AWS for continue integration.

Human Machine Interfaces

Solely designed and maintained a .NET C# application paired with Beckhoff API in efforts to automate the project lifecycle of custom HMIs. Local MySQL, MQTT backend for storage and SCADA transactions. Installers, updaters, and telemetry data implemented using Full Stack approaches and AWS serverless services.

Technical Skills

Programming Languages: .NET C#; Python; SQL; PHP; Java; Bash; Ladder Logic; JavaScript; Standard IEC 61131-3; Multi-threaded and event driven applications.

Communication Methods: TCP/UDP, Web Sockets, Custom APIs and third-party integration, MQTT, and various IoT methods.

Industrial Engineering Software Skills: Allen Bradley Suite of Products including Studio 5000, VFDs, Factory Talk; Omron Suite of Products including NJ Series as well as VFDs and HMIs; Robotic Platforms including Adept, Denso, and ABB Robotics; Beckhoff Suite of Products including TwinCAT3, Motion, C# Interfacing, Logging, SCADA; Vision Systems including Keyence, IFM, and Cognex Platforms as well as Integration; Microsoft Visual Studio including .NET, C#, In House Development for Applications and Web

Full Stack: AWS – EC2, S3, Glacier, LightSail; Proxmox and ESXi Virtualization; Linux (Headless) (Ubuntu/Debian) with scripting; Apache2 (PHP/HTML), Fully secured, and Reverse Proxying Docker; API usage/creation (Flask)

Computer Aided Design: SolidWorks, SolidEdge, AutoCAD (Mechanical and Electrical) and other various Parametric Solid Modeling Programs

Electrical Engineering: AC and DC, Digital and Analog Signal analysis. Low Level communication protocols (CANbus, EtherCAT, Ethernet/IP, DeviceNET, Discrete IO, etc.); JTAG Debuggers.

Professional Skills

- Database Design & Management
- Capturing & Interpreting Requirements
- Building & Delivering Scalable Applications
- Advanced & Integrated Automation
- User Stories & Use Case Models
- Applying Design Patterns using Best Practices
- Customer Relations & End User Training
- Software and In-Depth Electrical Troubleshooting
- Confidentiality and ITAR Compliance
- CANBus & Custom Networking Protocols
- Remote Support & Troubleshooting
- Project Management & Detailed Test Cases
- Stability & Calibration Algorithms
- Proprietary PC Based Automation Platform
- Creating Test Scripts to Debug Applications
- Excellent Verbal & Written Communication
- Remote and On-Site Extensive Debugging
- Critical and Time Sensitive Work Environments

Work History

Software Applications Engineer

2021 to Present

Bright Machines – Austin, TX

- Work on industrial automation applications through the mindset of a Software Defined Manufacturing forward approach focusing on reusability and automated deployment
- Driving the incorporation of industrial standards and best practices across all divisions
- Review and approve system design, system architecture and process design maps for incoming projects
- Create and maintain reusable device drivers for new devices within our core architecture
- Line Controller implementations including line control trafficking, MES integration, data collection, etc.
- Maintain client Intellectual Property strictly confidential

FillPRO Project Engineer

2019 to 2021

Xigent Automation Systems – Lewis Center, OH

- Oversee all FillPRO software development, technologies, and intellectual property.
- Coordinate with end user and project managers to facilitate on-time acceptance.
- Facilitate ongoing training of FillPro employees of current technology and best practices for executing successful dispensing applications.
- Prepare project status reports and issues lists to review with Project Manager of all FillPro systems on the floor and during installation as it relates to progress and budget.
- Maintain and oversee all development on core FillPRO algorithms and data collection and analysis.
- Analyzing user requirements, procedures, and problems to identify the system components and develop the design and functional specifications for the automation system.
- Review quotes prior to release ensuring all necessary technologies are properly comprehended with respect to the customer specifications in an effort to minimize risk.
- Review and approve mechanical and electrical designs before release and procurement.

Industrial Systems Control Engineer

2014 to 2019

Xigent Automation Systems – Lewis Center, OH

- Developing .NET applications, implementing SCADA Control and creating a Reporting Engine, while managing the interface between the hardware and software development for the automation system.
- Troubleshooting, remotely and on-site, both Electrical systems (AC/DC, Digital/Analog) and software packages (High and Low Levels) with a systematic approach for speed and efficiency.

- Powering-up electrical systems and configuring hardware per application specifications, checking the quality of assemblers' and technicians' work and responding to inquiries during assembly.
- On-Site power up and check-out procedures to ensure system reliability at customer site. Experience directing and managing installation teams while working closely with the end user for assistance, training, and operations.
- Writing user manuals to communicate functionality of company developed programs, as well as producing technical writing including Compliance, Timing Charts, API Docs, Traceability Matrix, Operating Manual, Troubleshooting Guide, and a Spare Parts List.
- Reviewing, repairing, and redesigning legacy code, while also troubleshooting issues with existing company installed systems.

Public Safety Dispatcher

2014 to 2015

Department of Public Safety – Columbus, OH

- Served as a 911 Operator and Police Dispatcher, receiving, evaluating, prioritizing, and relaying calls for emergency and non-emergency public safety aid, dispatching appropriate units and coordinating the response of emergency personnel.
- Operated a variety of telecommunications equipment including radio, telephone, and computer aided dispatch systems, as well as performed a wide variety of specialized clerical duties involved in the preparation, maintenance, and release of materials related to law enforcement activities.
- Composed and transmitted messages to other agencies, as well as provided information and referrals to citizens, public safety personnel, and media by answering calls from the County and outside areas to enable communication during non-emergency situations.

CAD Technician

2013 to 2014

McKinley Leather – Marion, OH

- Utilized a comprehensive understanding of all CNC machining and programming operations to increase productivity and optimize machining programs and procedures, while working in close concert with machinist, leads, engineering teams, and machining operations management.
- Created 2D and 3D finished part drawings and maintained current part drawings via modifications and enhancements, updating and documenting designs for future revisions.
- Translated CAD Drawings to CNC Packages and used 3rd party verification software to validate NC files generated before releasing to shop, as well as maintained revision control on programs and set-up sheets.
- Created new, unique designs, while offering suggestions on drawing changes to improve manufacturability and providing consistent ideas for process improvements.
- Analyzed engineering drawings related to new and changed designs, and prepared detailed operation sheets for machining including the preparation of programs for various numerically controlled machines and products.
- Compared and implemented written engineering requirements into operational machine programs, while creating or changing programming methods and CNC codes using CAM software, in addition to selecting proper speeds, feeds, and tooling based on selected equipment.

Education

Franklin University & The Ohio State University – Columbus OH

2013 to Present

Bachelor of Science in Computer Science and

Bachelor of Science in Electrical and Computer Engineering

- Part time attendance is ongoing but paused due to COVID.
- Open to relocation as classes will be continuing online.

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REFERENCES

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Beckhoff Automation Engineer and Training Lead

Close colleague and Beckhoff technical point of contact for many years

Sandy Kopasz

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Former Xigent Automations Systems Project Manager

Previous Project Manager of mine at Xigent Automation Systems

Austin Hamilton

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Former Xigent Automation Systems Control Engineer, Colleague

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