

INDEPENDENT PYTHON and C++ DEVELOPER INDEPENDENT PYTHON and C++ DEVELOPER INDEPENDENT PYTHON and C++ DEVELOPER North Canton, OH Electrical & Computer Engineer with demonstrated success in research and development involving vehicle, motors, motion controls, mechanical dynamic systems and electronic controls. Self-motivated and innovative thinker who consistently pursues new challenges to stretch abilities, expand knowledge and bring greater returns to employer. Experiences include: C++ and Python Programming Mechatronic Control System Embedded Real-Time System Control Algorithm Design Motors and Motion Control System Neural-Fuzzy Control System Data Acquisition System Power Control System 15 Significant Technical Publications Three Patents Credited Work Experience INDEPENDENT PYTHON and C++ DEVELOPER 2016 to 2017 C++ and Python programming development on object-oriented skills, DRS CONSOLIDATED CONTROL INC - Danbury, CT 2009 to 2016 DRS Consolidated Controls, Inc. (DRS-CCI) designs, manufactures, qualifies, and tests instrument and control systems for commercial nuclear power plants. Throughout our 55-year history, our control systems have been installed worldwide in over thirty commercial nuclear power plants. Principal System Engineer DRS CONSOLIDATED CONTROL INC 2009 to 2015 Working on power control system design and simulation using Matlab/Simulink, Simpower system, Simulink Real-Time, Code Generation and Code composer of TI DSP to develop and evaluate hardware in the loop of embedded control products. Product Engineer Specialist TIMKEN COMPANY 2008 to 2009 Developed and evaluated new products for automotive and energy industries. Team leader for 5 team members Developed hybrid skid-steering applications using Controller Area Network (CAN) bus capability & TMS320F2808 DSP to showcase company's technological acumen to customers and business partners. Designed high precision testing system for rotary encoder using LabVIEW programming resulting in improved performance of encoder. Created wind energy bearing along with sensing and condition monitoring system using NI PXI-8106 real-time controller that provided telemetry used to improve bearing performance and increase the durability of bearing life. TIMKEN COMPANY - Canton, OH 1997 to 2009 Leading global manufacturer of highly engineered anti-friction bearings and assemblies, high-quality alloy steels, aerospace power

transmission systems and related products and services. Principal Development Engineer TIMKEN COMPANY 2000 to 2008 Led product development for automotive new product team. Led development of Magnetorheological (MR) clutch in partnership with GM. MR Clutch was less expensive to manufacture and permitted tighter tolerances in operation (easier to control). Designed optimal Magnetic Clutch controller using dSPACE that improved product performance and reduced development cost Principal Research Engineer TIMKEN COMPANY 1997 to 2000 Identified and transitioned marketable products from academia and industry. Team leader for 3 team members. Partnered with Burlington Northern Santa Fe (BNSF) to develop on-board rail bearing conditional monitoring system. Developed real-time measurement, data acquisition and HC12 controller for monitoring system. Provided Timken with unprecedented data and strengthened relationship with customer. Conducted research with Case Western Reserve University to design algorithms for bearing condition monitoring to avoid derailment caused by bearing wear and extend the durability of bearing life. Developed algorithms for damaged bearing condition monitoring using FFT, Envelop Detection, neural network learning, and wavelet transform. Improved performance and reliability of algorithm to detect incipient bearing wear and damage. Postdoctoral Research Scientist TENNESSEE STATE UNIVERSITY - Nashville, TN 1993 to 1997 Nashville, Tennessee State-funded historical university in Tennessee with 10,500 students and student/faculty ratio of 24/1. Postdoctoral Research Scientist 1993 - 1997 Research Scientist position for NASA grant number NAG-1471 titled "Robust Neuro Controller." Conducted research in control systems, Fuzzy Logic Controllers, Neural Networks Controllers and intelligent controllers. Developed fuzzy-neural networks to model aerodynamic system provided by NASA Lewis Research Center. Successfully created simulation that assisted NASA in improving system performance. Education Electrical and Computer Tennessee State University - Nashville, TN Ph.D. in Electrical and Computer Engineering New Mexico State University - Las Cruces, NM Skills C+ (1 year), FUELS (1 year), Matlab (6 years), PYTHON (1 year), Real-Time (10+ years) Additional Information TECHNICAL SKILLS HARDWARE: MC68hc08, 12, MPC555, Tlmsp430, TMS320F28XX, NI PXI-8106 embedded controller, and dSPACE. SOFTWARE: Windows, C, C++, Matlab, Simulink, Real-Time Workshop,

Code Composer, Assembly and LabVIEW, and Python programming   TECHNICAL EXPERTISE  
TMS320F28x Workshop to be helpful:   Embedded Processor design   Digital Signal Processor  
design   C and assembly language programming   Graphical development environments such as  
Code Composer Studio

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