RESUME OF
Edward Kay Cholakian

PERSONAL:

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SKILLS:

- C/C++ Assembler ARM, Microchip
- C# Windows
- Linux applications, networking, device driver development
- Network communication: Ethernet, IP, TCP/IP, MIL-STD-1553, ARINC 429
- Embedded systems hardware and firmware design
- Autodesk Fusion 360 Unified Electronics and PCB Design

EXPERIENCE:

Philips Medical Systems, Andover, Massachusetts
CONSULTING SOFTWARE ENGINEER
Designed, using C#, a system to integrate a large network of ceiling mounted displays onto a hospital patient monitoring system. These displays presented prioritized animated medical alarm information for the patients located in the areas each sign covered. Communication used a combination of multiple TCP/IP connections and gateways to RS-485 networks.
(February 2021 to May 2021)

Honeywell Aerospace, Clearwater, Florida
CONSULTING ELECTRICAL/FIRMWARE DESIGN ENGINEER
Designed and developed Linux/Windows C/C++, C#, software to a provide a json configurable communications gateway between MIL-STD-1553 and ARINC 429 busses and TCP/IP networks using the Honeywell's ULINK socket protocol. The project used a Linux based United Electronic Industries data acquisition and control system and Windows based computers to implement portable test systems for fixed wing and rotor aircraft inertial measurement units (IMUs).
(May 2018 to June 2020)

Engineering Consultant (September 2000 to May 2018)
Product definition, managing product development. Hardware design of digital, analog, and RF systems. Board design and layout. Firmware design and coding in C/C++/C# and assembler using mixed signal processors. DSP implementations.

Projects include:

Developed software defined radio designs and DSP routines to process IQ analytical signals.

Developed a multi-channel vortex airflow sensor and airflow control system. The system measured airflow over a wide range of rates with high precision. Acoustic LPFs and DSP FIRs were used in the embedded hardware to improve system performance. The control and sensor system interface included voltage, current-loop, and BACnet MS/TP network interfaces.

Developed low level firmware to control a variable speed three phase AC induction motor.

RAYTHEON MARINE ELECTRONICS, Fort Lauderdale, Florida
<u>SENIOR SOFTWARE ENGINEER</u> Developing algorithms and software to implement sonar and sonar data displays for commercial applications using ARM processors.
(October 1999 to April 2000)

CONTROLLED DISTRIBUTION SYSTEMS, Fort Lee, New Jersey
<u>SYSTEM DESIGN ENGINEER</u> Designed hardware and software for multiprocessor networked vending machines. (Sept. 1998 to July 1999)

ADVANCED MARINE PROPULSION, Norwalk, Connecticut
<u>SYSTEM DESIGN ENGINEER</u> Designed a network controlled electro-hydraulic fly-by-wire system for Marine applications. The system used the LONTalk protocol.
(June 1998 to Sept. 1998)

WRAY-TECH INSTRUMENTS, Stratford, Connecticut
<u>ENGINEERING PRODUCT MANAGER</u> Directed the product development of heavy vehicle instrumentation systems for dynamic load measurement. The products used Windows based embedded computers and networks especially optimized for harsh environments.
(August 1992 to April 1998)

ADVANCED TECHNICAL SERVICES Orange, Connecticut
<u>ENGINEERING PRODUCT MANAGER</u> Developed system design, hardware, software to bring interactive digital video interfaces to banking equipment. Software developed included design of one of the first software only real-time digital audio and video compression and decompression algorithms.
(1989 to 1992)

AMERICAN LIGHTWAVE Wallingford, Connecticut
<u>SENIOR ENGINEER</u> Developed communication software and digital hardware for a networked multiprocessor data communication and video switching systems for fiber digital television.
(1979 to 1989)

PERKIN-ELMER CORPORATION Norwalk, Connecticut
<u>SCIENTIFIC PROGRAMMER/SOFTWARE ENGINEER</u> Developed wavefront metrology programs for optical systems. Worked on the computer simulation of adaptive optic systems and high energy propagation. Assisted staff research scientists and mathematicians. Wrote numerical algorithms for embedded systems.

EDUCATION:

UNIVERSITY OF CONNECTICUT Storrs, Connecticut
<u>ELECTRICAL ENGINEERING BSEE/CS</u> Concentrating in electronic circuit design, interactive graphics, artificial intelligence, and switching theory. Wrote one of the first tournament rated, US Chess Federation member, chess playing programs. This program used an interactive touch screen controlled by a graphics coprocessor. The program was the first to incorporated fuzzy logic for move selection.

STATE UNIVERSITY OF NEW YORK, New Paltz, New York
Advanced French language courses.

LANGUAGES: Conversant in French

LICENSE/RATINGS: 2200 hours total time with 1000 hours multiengine turbine and jet. Commercial license with multi-engine and instrument rating. Flight instructor (current).

Radio License KB1OIE Extra Class