

# Agostinho Henriques

Senior Software Engineer - Science Engineering Associates, Inc

Willington, CT - Email me on Indeed: [indeed.com/r/Agostinho-Henriques/749ef3bfb5752731](https://indeed.com/r/Agostinho-Henriques/749ef3bfb5752731)

Senior Software Engineer with MS Office Suite Software skills. Prior work with proprietary engineering IT Software and Hardware solutions background. Very detailed oriented and well-spoken individual.

Authorized to work in the US for any employer

## WORK EXPERIENCE

### Software Engineer

Science Engineering Associates, Inc - Tolland, CT - December 1988 to Present

Major Software Projects:

- Next generation real time data acquisition system, the Model 300. This system is based on the IBM PC platform under the QNX4 real-time OS and Photon GUI. This system was based on the earlier M200 system but has many more features and capabilities. While the M200 system was limited to function key inputs the M300 system has a mouse and GUI to work with. The major difference was that the M300 system can be configured via dialog boxes which make the project setup for the user much simpler to achieve. Developed a real time UDP broadcast link between M300 data acquisition systems allowing for one system to transmit data to many systems. One of the most important features of the M300 system is that with the same software application we cover the needs of many clients' data acquisition requirements. One of the features of the M300 system is the Up/Down and Forward Looking Radar data acquisition and displays. The system works with many kinds of PCI/ISA interfaces and weather research instrumentation. Our clients use our system for weather research and aircraft & engines certifications.
- The Water Content Measure (WCM-2000), the Isokinetic Probe (IKP) and the Mass Air Flow (MAF) systems are all based on the Aduc845 chip (Analog Devices). The Embedded software that resides on the chip was C based. The user interface for the WCM-2000 and IKP were QNX 4 real-time based as well as the test software for the MAF system. The MAF system doesn't have a GUI to work with it runs standalone.
- One of the applications was an embedded solution, SUSA II PCI Interface (Smart UART, Smart ARINC) for a major aerospace client (using C and MPC8245 Motorola chip). Engineered a first-generation SUSA ISA Interface (using C and V33 NEC chip). Both projects were completed ahead of schedule and have been running trouble free ever since. In both cases, we tested software that were QNX 4 real-time OS based and Lynx OS based.
- Worked on many different projects using different platforms. Developed software for the SUN and Macintosh systems to take in real time serial data from the data acquisition system. This software package included data processing and scientific displays. Developed on a PC platform under MS Windows, a one of a kind industrial control coating system to coat copier rolls with rubber. This was initially a research and development machine, UDM (Universal Doctoring Machine). After a very short R&D period this machine was turned into industrial production, replacing several other obsolete machines.

### Senior Software Engineer

Science Engineering Associates, Inc - Tolland, CT - 1988 to Present

- Assumed lead role in software development under QNX 4 Real-Time OS, QNX 6 Real-Time OS, GNU LINUX and Windows.
- Coordinated embedded software development for several different microprocessors using C compilers.
- Managed and oversee a small staff for the development of the M300 data acquisition system. Desktop publishing using FrameMaker for the M300 User's guide (200 pages) and M300 Reference manuals (600 long).

- Developed several network programming features (TCP/UDP), for the M300 system as well as standalone utilities.
- Oversaw all hardware programming for PCI/ISA interfaces for the M300 system.
- Coordinated training and customer support for the over 100 M300 data acquisition systems.
- Established field support for Customer's research projects worldwide.
- Analyzed and evaluate purchase of components for the M300 data acquisition system including industrial chassis, power supply, single board computer, passive backplane, and acquisition/control hardware interfaces.
- Manage the build process of the M300 systems from bare components to finished system.
- Install setup and maintain QNX 4 RT-OS software/hardware platforms for over 100 M300 data acquisition systems.
- Network administration/maintenance for the entire internal network, including LAN and WAN devices, assign IP address for each machine, etc.
- Oversaw over 1000 M300 data acquisition system configuration projects for 50 different clients world-wide.
- Configured over 250 different instruments that our M300 data acquisition system supports, some of them are one of a kind.
- Worked on some earlier projects with small IT team using Microsoft Visual Studio .Net (C/C++). The motivation for this was to come up with a MS Windows product for the M300 system that was capable of playback of the M300 data files.

#### Major Software Projects:

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### **Computer Instructor**

Science Engineering Associates, Inc - Stafford Springs, CT - 1994 to 1996

Adult education instructor, conduct classes for Intro to Computers, MS Windows, Word Perfect, Word and Excel.

### EDUCATION

#### **Bachelor of Science in Computer Science Software**

The University of Connecticut - Storrs, CT

1988

### ADDITIONAL INFORMATION

Skills:

Hardware:

Window 7, Windows XP, Windows 10, QNX4 OS RTOS, Photon GUI, QNX6 RTOS, Linux, UNIX, Embedded Systems, IBM PC DOS based, Analog, Digital I/O, ARINC429, GPS, RS323, RS422, MPC8245, Aduc845, NEC V33, 6502 and MC680X0.

Software:

Watcom C, Phab, Green Hills Software MULTI, Microsoft Visual Studio .Net (C, C#, C++), MS Excel, MS Word, MS Outlook, MS PowerPoint, FrameMaker, PageMaker, Photoshop, FileMaker Pro, Dreamweaver, Lab View and RTX64.

Networking:

LAN/WAN setup/optimization, FTP, NFS, TCP/IP, UDP, XML, NTP, PPP, Sockets.

Services:

Desktop support, regular data backup and network maintenance.