

## Personal Details

**Website** – <https://www.ekn.io>

**Github** – [eriknyquist](#)

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## Areas of Expertise

### Programming Languages

C  
C++  
Python  
UNIX shell scripting (bash, sh)

### Tools/Environments

Git  
Github  
Gitlab  
GCC/Clang  
Gimpel PC-lint/Flexelint  
Makefiles  
GNU ld (linker) scripts  
Google Protocol Buffers  
GDB  
Valgrind  
L<sup>A</sup>T<sub>E</sub>X  
Jenkins  
JIRA  
Unity/CMock  
Doxygen

### Personal skills

- Test-driven development
- Fault finding and debugging on custom embedded systems
- Firmware system design for memory constrained embedded systems
- Rapid prototyping/testing with Python or UNIX shell scripting
- MISRA C compliance via static analysis tools

### Interests

- Compiler design & implementation
- Programming language design & implementation
- Playing music (drums, piano)
- Music recording & production

An enthusiastic and skillful software engineer, with a comprehensive knowledge of development and validation practices for embedded software systems. Accustomed to delivering and enforcing high quality code, tests, and documentation.

## Experience

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### **Sr. Firmware Engineer, NOVO Engineering** **Aug. 2017 - present** **Vista, CA**

Designing and developing firmware and software for IEC-62304 compliant medical device products (RTOS and bare-metal)

- Participated in design/development of firmware for multiple medical device products (closed loop insulin delivery system, "smart" insulin pen cap, portable defibrillator system), using various SoCs (nRF52, STM32, Cypress/Infineon, PIC32)
  - Participated in Design Verification testing for multiple medical device products
  - Participated in creation of software development lifecycle and verification documentation for multiple medical device products
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### **Software Engineer, Intel** **Aug. 2016 - Aug. 2017** **San Diego, CA**

Developed low-level hardware drivers and firmware for Intel's low-power SoC products with a small team, including Intel's Galileo, Joule and Curie modules (Linux, RTOS and bare-metal). Most notably, the Intel Arduino 101 development/maker board.

- [www.github.com/01org/corelibs-arduino101](http://www.github.com/01org/corelibs-arduino101)
  - [www.github.com/01org/Intel-Pattern-Matching-Technology](http://www.github.com/01org/Intel-Pattern-Matching-Technology)
  - [www.github.com/01org/zephyr](http://www.github.com/01org/zephyr)
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### **SoC Software Engineer, Intel** **Aug. 2012 - Apr. 2016** **Ireland**

Started as an intern after college, became a permanent employee after 6 months. Eventually participated in development/testing of Linux-based software & drivers for Intel Quark SoCs, bringing the Intel Galileo board (first x86-based Arduino board) from design to market, pre-silicon emulation testing/verification for Intel Quark SoCs, and new silicon bringup for Quark SoCs.

## Education

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**Master of Science, Computer Science**  
University College Dublin, Belfield, Ireland. Graduated 2015.

**Bachelor of Engineering, Audio Visual Media Technology**  
Dun Laoghaire Institute of Art, Design and Technology, Dublin, Ireland. Graduated 2012.