

Nick Montelibano

Software Engineer

Enthusiastic software engineer looking to solve challenging problems with innovative solutions

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WORK EXPERIENCE

Software Consultant Cadence Neuroscience

01/2023 - Present Redmond, WA
Neuromodulation startup to treat epilepsy through implantable stimulation

Achievements/Tasks

- Authored and defined requirements for a consumer-facing mobile application enabling communication with an implantable stimulator
- Served as the Technical Lead representing the medical device company in collaboration with a third-party contracting firm to develop a patient controller mobile application
- Designed and implemented data communication protocols and architecture for key components of an implantable neuromodulation system

Software Consultant Full Swing Golf

10/2021 - Present
Golf Simulator company

Achievements/Tasks

- Architected the embedded Linux application inside a golf simulator responsible for processing data from multiple high-speed cameras
- Optimized processing pipeline for camera data from an FPGA to a PC to minimize shot latency
- Developed all manufacturing and calibration software applications used in the production and deployment of a golf simulator

Senior Software Engineer / Consultant Minnetronix Medical

06/2016 - 05/2023 St. Paul, MN
Medical technology company focusing on contracting development and manufacturing of medical devices

Achievements/Tasks

- Led the development of a real-time embedded 3D rendering Class C diagnostic device, utilizing technologies such as QNX and QT
- Architected several embedded microcontroller solutions for real-time applications including embedded stimulators, electroporation devices, and a wireless charger for an implantable medical device
- Pioneered the company's first Android-powered BLE medical device controller, implementing the user interface and BLE communications protocol
- Integrated the company's first automated C++ unit testing framework using the Google Test framework to test medical software to comply with ISO 62304 for FDA submission

SKILLS

Scalable Software Architecture Real-Time Systems
Software Requirements Specification Embedded UI
QT 3D Rendering Bluetooth / BLE Android
USB Communication Linux QNX Yocto Linux

EDUCATION

Bachelor of Science, Computer Engineering Iowa State University

08/2012 - 05/2016 Ames, IA

AWARDS

Minnetronix Engineering Excellence Award (2017)

Minnetronix Medical

- Awarded for crafting a 3D rendering solution to a graphics intensive problem in the embedded 3D rendering space
- Prevented months of potential development time porting legacy OpenGL software by implemented a modern JavaScript solution

First Place Hardware project for ISU Hackathon (2015)

Iowa State University

- Designed and implemented a robot that teaches kids how to program by scanning RFID cards, each representing an instruction for the robot
- Integrated low level GPIO/SPI hardware design, high level objective logic via Python, and an informative and clean web GUI

LANGUAGES / FRAMEWORKS

C++	● ● ● ● ●
Python	● ● ● ● ●
C#	● ● ● ● ●
QT / QML	● ● ● ● ●
C	● ● ● ● ○
Kotlin	● ● ● ● ○