

BRENDAN NELLIGAN

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Professional Summary

Innovative software engineer developing surgical navigation software for mixed reality platforms. Collaborative problem solver dedicated to improving patient care through robust medical device software. Energetic professional with the technical and interpersonal skills necessary to deliver effective solutions with a lean engineering team.

Skills

- C++
- C#
- DICOM medical image standard
- Computer vision solutions
- Mixed reality development (AR/VR)
- Excellent interpersonal skills

Experience

Staff Software Engineer

Dec 2021 - Current

PolarisAR

Beverly, MA (remote)

- Core developer of a surgical navigation solution for Total Knee Arthroplasty in augmented reality.
- Developed a WinRT plugin for Unity to expose camera frames from a C++ API to the C# app.
- Engineered a solution for importing marker calibration data via a custom QR code.
- Migrated the application to support additional platforms beyond the HoloLens 2.
- Facilitated software architecture documentation for FDA 510k clearance.

Software Engineer

Jun 2018 - Dec 2021

Samsung Neurologica

Danvers, MA

- Software platform R&D for IEC 62304 compliant class B medical devices (CT scanners).
- Developed a computer vision solution into production using the OpenCV library.
- Proactive implementation of architectural improvements to reinforce system-wide reliability.
- Implemented complex features that were critical to patient safety and quality of care.

Education

Bachelor in Science - Mathematics

Anticipated: 2024

Southern New Hampshire University | 3.76 GPA

- Calculus I - III, Differential Equations
- Linear Algebra, Mathematical Modeling
- Mathematical Proofs, Formal Logic

Associate in Science - Animation and Graphic Game Programming

May 2018

NHTI, Concord's Community College

- Data structures
- Networking (WSA, Photon Unity Networking, and UNet)
- Database development and management (Microsoft SQL & MySQL)
- Full stack web development (HTML/CSS, Javascript, PHP, Apache, Flight RESTful API)

Accomplishments

- MIT Reality Virtually 2019 hackathon winner (Accudrive - Best Use of WayRay SDK)
- Winner of state level FBLA Game Simulation and Programming competition 2013
- Cheshire Career Center Outstanding Student 2014