

# Vishwanath Raman

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[vraman3.github.io/](https://vraman3.github.io/) | [LinkedIn](#)

## Master's Thesis

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### Prediction of Ablation Site for Ventricular Tachycardia(VT) Using Machine Learning

February 2019

- Analyzed performance of multi task learning versus traditional regression models like lasso to predict the ablation site for VT.
- Compared different penalty terms for the multi task learning models.
- Pre-processed the Electrocardiogram (ECG) data and manually annotated onset and offset of the QRS complex for analysis.

*Tools/Software: MATLAB, Python (scikit-learn), C++, Bash.*

## Experience

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### Software Engineer, Sterling Medical Devices

April 2018 – September 2018

- Developed front end and back end using C# WPF in an application to be used for clinical trial, using the MVVM architecture.
- Performed static analysis and unit testing using SciTools Understand and Tessy 4.0 on a native C code base.
- Prepared documents required for 510(k) submissions to the FDA using company guidelines.

*Tools/Software: C#, C, C++, MS Visual Studio, SciTools Understand, Tessy 4.0, Polarion.*

### Software Engineer II, Baxter Healthcare Corporation

October 2015 – August 2016

- Automated manual test procedures for the Master Drug Library Editor (MDL).
- Development of MDL using the WPF framework in C# and LINQ.
- Implemented and debugged the Wi-Fi protocols for the Spectrum Infusion Pump.
- Followed agile development using Scrum.

*Tools/Software: C#, C++, MS Visual Studio, Wireshark.*

### Research Assistant, Rochester Institute of Technology

January 2015 – May 2015

- Tracked facial features of a user onto a custom animated model in real-time, which could then be displayed on a separate screen/projector.
- Showcased at the Year of Light Street Light Festival 2015 in Rochester, NY.

*Tools/Software: Autodesk Maya, Faceshift Studio, Unity, C#.*

### Research Assistant, Rochester Institute of Technology

September 2014 – September 2015

- Used an augmented reality device(CyberGlove II) for medical diagnosis, in collaboration with University of Rochester.
- Developed existing code base and collaborated in the design and implementation of data collection for analysis.
- Contributed to the published paper in HAND (N.Y.) [Link to publication.](#)

*Tools/Software: CyberGlove II, MS Visual Studio, Qt, C++.*

## Highlights

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|---------------------------------------|--------------------------------------|
| • C++, C#, MATLAB, Python, Java       | • Git, Svn                           |
| • HTML, CSS, JavaScript (Basic)       | • Agile development : JIRA, Polarion |
| • Scikit-learn, OpenGL, LINQ, SQL     | • MS Visual Studio, Eclipse, Unity   |
| • Linear Regression, Machine learning | • Static analysis, Unit Testing      |

## Projects

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- Developed a renderer in C++. Used STL. [\(Source\)](#)
- Personal website using HTML/CSS and JavaScript. [\(Source\)](#)
- Created a parser and renderer to display a .obj file from Maya, using OpenGL in Java. [\(Source\)](#)
- Developed a system to play music from gestures using the Microsoft Kinect. (*Team Project*) [\(Source\)](#)
- Implemented an A\* search, random forest, and neural network in Python. (Source available on request)

## Education

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### Master of Science in Computer Science

August 2013 – February 2019

Rochester Institute of Technology, Rochester, NY, USA

### Bachelor of Engineering in Computer Engineering

July 2008 – July 2012

University of Mumbai, Mumbai, India