**EPICS 2019**

**Invascular IUPUI**

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**Introduction**

 InVascular is a project by IUPUI Graduate students to turn clinical images into 4-D blood flow animations. Our EPICS group initial goal was to create an front end interface for the research being conducted by Dr. Whitney Yu and IUPUI graduate students. Eventually, this goal developed into a website to demonstrate the functionality of their research. This report contains the details of the website, distribution of workload, and instructions for future EPICS work on this project.

**Website Details**

The main features of the website include descriptions and animations of the work being done by IUPUI Invascular. In addition, there is a page for data input along with a results page. All of this is front end development to provide an example of future functionality.

**Workload Distribution**

Matthew O’Hern led the main development of the HTML and CSS. Matthew Nims took the lead on managing the software and tools used for this project. Tyler Whang was our graphic designer who developed and updated our wire frame to show to the client. While the final product uses strictly HTML, CSS, and a little JAVASCRIPT, PHP, C#, and Razor were explored for options of future back end development of this web app.

**Instructions For Future Development**

With a few modifications, the web app could theoretically be separated from visual studio. However, we recommend sticking with visual studio as your IDE of choice for future development. The main task of a future EPICS team will be back end development. This could include but is not limited to: login functionality, transfering of data input, handling output from data input, and user specific functionality. To facilitate this, here’s a list of links to get future EPICS teams started.

For general tutorials on software languages W3School is a great choice:

<https://www.w3schools.com/>

For web development on a microsoft platform(visual studio):

<https://docs.microsoft.com/en-us/visualstudio/ide/quickstart-aspnet-core?view=vs-2019>

For publishing your web app to Azure:

<https://docs.microsoft.com/en-us/azure/app-service/app-service-web-get-started-dotnet>

For creating a database to accompany your web app on azure:

<https://docs.microsoft.com/en-us/azure/mysql/quickstart-create-mysql-server-database-using-azure-portal>

As a butler student you can activate an Azure account with 100 dollars of free credit to get you started. Also realize if you use multiple resources(databases, web apps, etc..) you will use up this credit faster than just using one. It will be beneficial to split resources among multiple EPICS team members so that you will not lose access before the semester ends. Students will have to make a judgement call on what hosting service will be best for the client.

To activate your student subscription for Azure:

[https://azure.microsoft.com/en-us/free/students](https://azure.microsoft.com/en-us/free/students/)/

For any other concerns you can email Matthew Nims at mnims@butler.edu.