Team formation link: <https://gtvault-my.sharepoint.com/:w:/r/personal/czeagler3_gatech_edu/_layouts/15/Doc.aspx?sourcedoc=%7B80CFC8EA-613E-44FB-BC68-43DD9688B92B%7D&file=Project%20Team%20Formation.docx&wdLOR=cB5ADB10B-28CE-7845-81A7-0AF4F9620272&action=default&mobileredirect=true&cid=a3f10c0d-5679-4a27-9d2e-cbd1c67b5d4d>

Buffalo Concussion Treadmill Test (BCTT) Application

Proposed by: Joshua Kent ([jkent40@gatech.edu](mailto:jkent40@gatech.edu))

The Buffalo Concussion Treadmill Test (BCTT) is a metric used by trained professionals (physical therapists, certified trainers, etc.) to help patients recovering from concussions and usually those suffering from post-concussive symptoms (PCS). This project will digitalize the traditional test into a mobile IOS application so it can be conducted more efficiently and use the data to give better insight about the recovery of the patient.

Personally, I have done this test in physical therapy when I have recovered from multiple concussions. I have first hand experience with it and know certain areas where digitalizing the process can bring significant improvement. I would like to form a team to further develop this project and see where it goes. I would love to hear any feedback, intertest, etc. and would be more than happy to discuss further details!

The following link is to a PDF that outlines the BCTT so you can see what application will be required to do:

[Buffalo Concussion Treadmill Test](https://cdn-links.lww.com/permalink/jsm/a/jsm_2020_01_28_haider_19-313_sdc1.pdf)

Additional preliminary research:

* [The Predictive Capacity of the Buffalo Concussion Treadmill Test After Sport-Related Concussion in Adolescents](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6492460/)
* [Use of graded exercise testing in concussion and return-to-activity management](https://journals.lww.com/acsm-csmr/Fulltext/2013/11000/Use_of_Graded_Exercise_Testing_in_Concussion_and.8.aspx)

Skills:

* IOS development (This will be MOST of the work)
  + General development
  + Apple Watch/Fitbit interaction
* UI/UX work
  + Making the application functionable, easy to use, and aesthetic
* Clinical Knowledge (Don’t need to have, just interest in learning)
  + Researching BCTT
  + Using research to displaying proper safety measures and make future suggestions
* \*Any skills for features you can think of works too!

*NOTE*: I came up with this proposal myself. As a result, I’m open to ANY suggestions. I’m more than happy and excited to explore additional related paths you can think of or any other features you would like to add.