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Weaver_COMP523-FA2021

Application Processing

Stage	Invite to Pitch
Program applying to	UNC Dept of Computer Science
Account Name	University of North Carolina at Chapel Hill
Founder's survey Prefill link	www.tfaforms.com/4600347?account=00141000005WvkV&campaign=&opp=0061M00001BZSw7

Opportunity

Opportunity Name	Weaver_COMP523-FA2021	Opportunity Owner	COMP523 ProgramMgr
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Primary Contact

First name	Michael
Last name	Weaver
Email	michaelw2017@gmail.com
Professional Title	Founder or Lead Developer

Project Idea

Reason for application	<p>Our team is working to address pelvic floor dysfunction (PFD). PFD occurs when the pelvic floor muscles become too tight AND/OR too weak and fail to function properly. This condition is quite common around the US/globe, and manifests itself through symptoms of varying severity, such as: urinary/fecal incontinence, pain during sex, painful menstruation, chronic pelvic pain, etc. To combat some of these issues, our team is designing an electrical "smart" wand used to provide sensory-based, interactive, pelvic floor physical therapy. This innovative design looks to address some of the treatment gaps that are present when working with the traditional, mechanical wand that is usually used to address PFD. The current therapy for PFD is trigger point release, in which patients/therapists use a purely mechanical wand, inserted into their vagina, to massage areas of tension known as trigger points. However, this process is extremely subjective and patients struggle to replicate the exercises at home without the live guidance from their therapists.</p> <p>Thus, our wand seeks to use sensory and imagery data to provide guided, targeted trigger point muscle release and vibrational therapy. By combining these wand components with a software interface, we hope to objectify and clarify this therapeutic process to improve the accessibility and affordability of pelvic floor physical therapy.</p> <p>Generally, we are looking for an interactive application to be developed to assist the "smart" wand users as they perform their pelvic PT floor exercises and track their progress with each session. More specifically, we would like the application to help our interactive "smart" wand do the following:</p> <ol style="list-style-type: none">1) Tell the user where the wand is while it's inside the vagina2) Tell the user where the wand needs to go (if it's in the wrong place)3) Interpret pressure measurements taken from the wand's built in sensors and direct the user to adjust the pressure they are applying4) Ask the user for feedback on their session5) Store each session's data with the purpose of displaying trends over time6) Provide education on how to use a wand for trigger point release (this just a repeat of any paper flyers that are handed to the patient) <p>By combining these deliverables into a mobile application, we believe that our "smart" wand can help improve the accessibility of pelvic floor physical therapy and remedy the problems associated with the prevalent disease state of pelvic floor dysfunction.</p>
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CS - Current Solution	To combat some of the issues with the mechanical wands (described above), we have engineered a “smart” pelvic floor wand. This interactive physical therapy device will assist the user as they palpate and massage their pelvic floor muscles while the phone application (connected to the wand via bluetooth) will guide the user on how to use the wand. The application will direct the user to position the wand while it is in the vagina by highlighting the muscles touched by the wand and will measure the amount of pressure applied to the muscles. This targeted treatment will allow the user’s physical therapy exercises to be more effective, leading to improved clinical outcomes. We’ve prototyped the sensing and mechanical components of the wand and are laying the framework for the interactive application. The prototype is able to provide feedback through software on laptops, however this is not as user friendly for the general patient population we are targeting. An ROI was submitted to UNC by the inventors on 10/2020 and data is currently being compiled for the patent application.
CS - Who are users?	The users of this smart wand phone application would be women with pelvic floor dysfunction who are completing pelvic floor physical therapy either at-home or in a clinical setting under a physical therapist’s supervision.
CS - Software Access Point	Android app (phone or tablet); Apple/iOS app (phone or tablet)
Other Access Point	
CS - Additional Constraints	No, not at this moment.
CS - Concerns with student ownership?	Yes, I have concerns.
CS - Describe Concerns	We have intellectual property concerns and request that students assign any IP they develop to UNC through the participant agreement form found on your website.
CS - Protected health information?	This software will not be storing patient health information, rather, it will be guiding the user through general trigger point release exercises and vibration therapy. The exercises themselves are common treatments for myofascial pain and muscle spasm.
Additional information	
Comments	From Form response - This project began as a senior capstone project in the UNC Biomedical Engineering Department. We have teamed up with the UNC affiliated organization above, FastTraCS. I am one of the recently graduated students who is on the capstone project that is now beginning to develop into its own entity.

Client Expectations

CS - How critical is software?	While the finalized app is critical to the performance of the “smart” wand, our team is flexible in that we are able to work with whatever progress is made by the student group. We are comfortable proceeding under the knowledge that there are no guarantees on what deliverables will be accomplished.
CS - Available to pitch?	Yes
CS - Available to convey requirements?	Yes
CS - Available to answer questions?	Yes
CS - Reasonable expectations?	Yes
Consulting - Attend team meetings?	Yes
CS - Able to pay for infrastructure?	Yes

Client Group

Founder 2	Delaney Cowart
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Founder2 First name Delaney
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Founder2 email delaneycowart04@gmail.com

Founder 3 Erin Carey
Founder3 first name Erin
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Founder3 email erin_carey@med.unc.edu

Founder 4 Devin Hubbard
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Pitch Survey Information

CS - Pitch Availability

Other Availability

CS - Recording of presentation

Project Name

Description

Application Details

Close Date 6/11/2021

Account Information

Educational Institution

Account Name	University of North Carolina at Chapel Hill	Phone	(919) 962-2211
Account Active Status	Yes - Active	Fax	
Website	http://www.unc.edu/	Email	
CRVF Investment		UNC DAVIE ID	
CAN investment		Account Owner	Shuford ProgramMgr
Contact			

Address

Billing Address	University of North Carolina at Chapel Hill Pittsburgh, Pennsylvania 27599 United States	Shipping Address	
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Additional Information

Description MIC stands for Music Industry Connected and is a small start-up that is trying to identify the correct course of actions for indie artists to take to have sustainable careers in the music industry. Eventually they want to turn into a music consulting firm for independent artists/

Comments

Parent Account

System Information

Created By Cindy Reifsnider, 9/30/2016 3:58 PM

Last Modified By Forms User API, 8/18/2021 10:55 PM

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