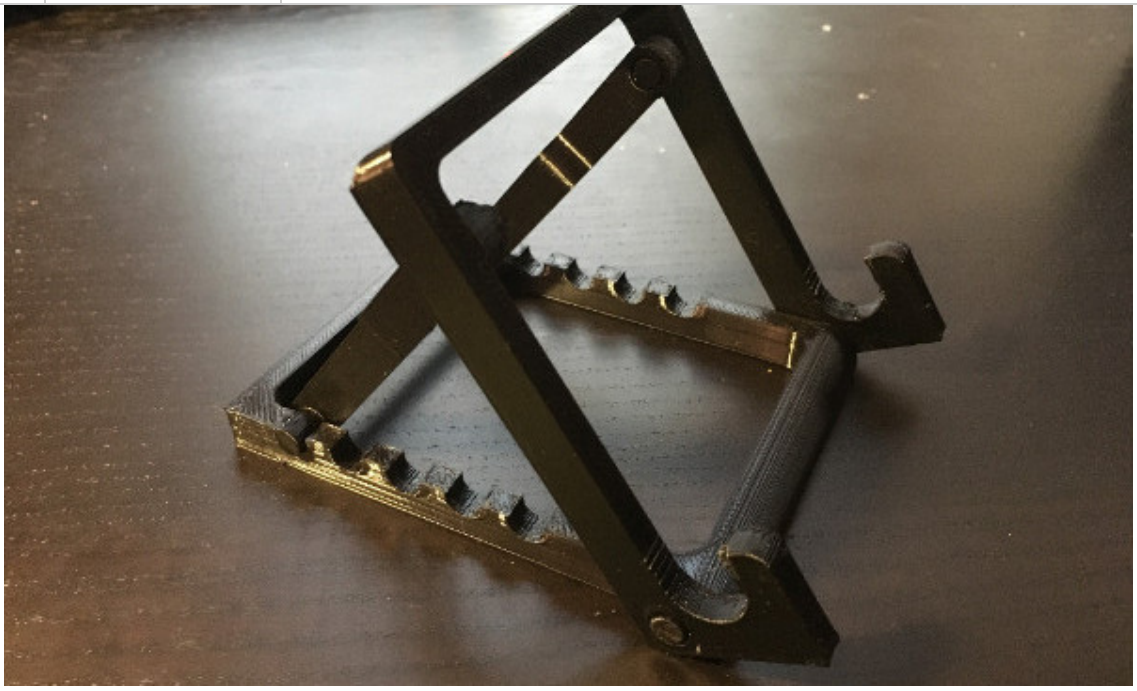
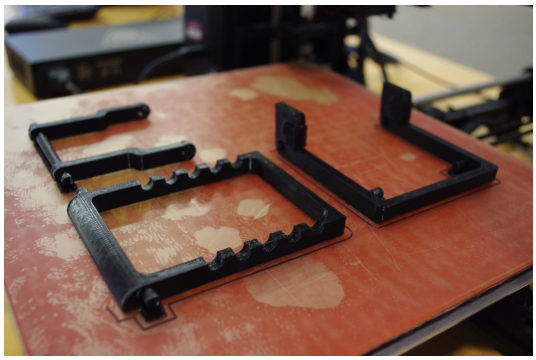
Makers @ HS/HSL: Getting Started with 3D Printing

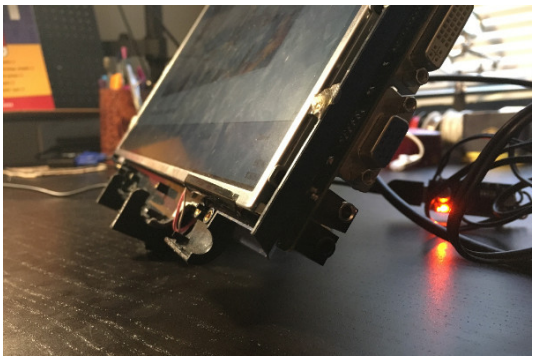
Maker:	Nabid Ahmed
Affiliation:	University of Maryland, Baltimore, School of Medicine MD/MS BioEngineering Program
Project:	3D print a tablet stand model downloaded from Thingiverse.com
Used:	Thingiverse.com, Lulzbot Taz5

Nabid Ahmed is a second year medical student in the MD/MS BioEngineering Program, a dual degree program in collaboration with UMCP's Department of Bioengineering. He's been curious about 3D printers for a long time, but never found the opportunity to use one until coming to the Health Sciences and Human Services Library. Nabid used the HS/HSL Innovation Space to print a 3D model of a tablet stand he found on the model sharing website Thingiverse.com.

Nabid's research interests include medical device fabrication, materials science, regenerative medicine, and tissue engineering, all of which are teeming with 3D printing applications. To start experimenting with this technology, he looked around his house to find something that could be improved with a 3D printed object. "Since I have a broken laptop with a monitor that still works, I thought about making a monitor stand so I can place it next to my working laptop to have a dual monitor setup on my desk."





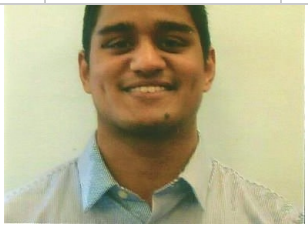


Top: the assembled tablet stand. Bottom: the three separate parts of the tablet stand as 3D printed on our Lulzbot Taz5 (left), and the broken laptop's monitor seated on the assembled stand (right).

Nabid enjoyed his initial experience with the library's 3D printers, and reports that the stand he printed works great with his laptop monitor. "I didn't expect it to be so simple to make a good print, and I was surprised there wasn't much to it."

After graduation, Nabid would like to get into a field that combines research and engineering applications in health care. Before then, he hopes to find a mentor interested in 3D printing.

Nabid Ahmed, MS2 student in the MD/MS BioEngineering Program, received his BS in biomedical engineering at the University of Connecticut.



Emerging Tech in the News and Literature

1. Students Turn Smartphone Cases Into Lifesaving Medical Devices (kent.edu)
2. Concise Review: Bioprinting of Stem Cells for Transplantable Tissue Fabrication (nih.gov)
3. In Situ Repair of Bone and Cartilage Defects Using 3D Scanning and 3D Printing (nih.gov)

Meet the Makers Series @ HS/HSL, Sep. 21, 12pm

Dr. Warren Grayson, JHU Biomedical Engineering, will discuss his tissue engineering work that combines 3D printed biodegradable plastic scaffolds and stem cells, in the lecture titled *"Regeneration of Vascularized Skeletal Muscle"*.

Join us for this first in a series of talks on emerging technology hosted by the HS/HSL Innovation Space. See our blog post for more information.

Introduction to 3D Printing

- September 5, 2017

Introduction to 3D Modeling

- September 11, 2017

From CT to .STL: Create a Printable 3D Model from CT Scan Data

- September 20, 2017

Register for our free workshops

New to the HS/HSL Innovation Space?

The Innovation Space is designed for innovative and collaborative hands-on learning experiences. It offers three 3D printers, two 3D scanners, a Mac Pro with specialized multimedia software, a plotter for poster printing, a zSpace virtual reality station, Google Cardboard viewers, a large DNA model, two molecule kits, a button maker, and a 3D printing pen. The staff provides orientations as well as workshops on a regular basis for those who are new to 3D printing and 3D scanning.

For more information, visit our webpage at http://www.hshsl.umaryland.edu/services/ispace/.