3DADAPT: ORGANIZING 3D PRINTABLE ASSISTIVE TECH DEVICES

Owen Halliday, Zachery Bingaman
Moravian University
hallidayo@moravian.edu, bingamanz@moravian.edu

Faculty Advisor: Jeffrey Bush, Moravian University, bushj@moravian.edu

ABSTRACT

The use of 3D Printing for the creation of accessibility devices has grown significantly in recent years. However, the 3D models are scattered across multiple different sites and are typically difficult to find. We are working on a solution: 3DAdapt. 3DAdapt has a curated list of 3D models from all across the internet. This allows for easier access for everyone to access these accessibility devices. Even without a 3D Printer, the order functionality, which uses Craftcloud's API, allows anyone to obtain a device specific for their needs. We allow for the direct upload of models or importing from many popular 3D Printing sites, such as Thingiverse or Pinshape. The 3DAdapt service is built using many technologies: MongoDB for the database, AWS S3 for model and image storage, Flask for the web server, Celery for distributed task management, and a Python backend to run background processing such as collecting data from different sources. At this point, the app is usable and publicly available. In the future we hope to expand to support for importing from more services and add features to make it even more usable.