**DigiClips Project Summary**

DigiClips has been developing Media Search software with University Capstone Teams for 7 years. We offer an entrepreneurial work experience. We monitor TV, Radio, Magazines, Newspapers, Social Media, Blogs, Web Media and more, 24/7, in 210 USA DMA's (Designated Market Area) and internationally. Clients give DigiClips keywords or other information about what they want monitored and then DigiClips sends to clients via email research reports with URL links, clips, metadata, Nielson ratings, analysis, graphics and more whenever search criteria are met. Our search website is supported by a video recording and an audio recording backend to generate data for Television & Radio. Additionally Newspapers, Magazines, Social Media, Blogs, Web Media are scraped from the web. Here are some projects that are available to work on:

1. We have a 5-year-old **Informational Website** that needs to be updated to reflect company changes, new web technology and the addition of a backend Express server to allow site users to send us AWS served email about working with us & survey information. This website is a main way for us to generate new customers for our business. Software to be familiar with would be Unbuntu-Mate 20.04 & 22.04, Angular 13, Nodejs, Express, React, Typescript and the MySQL Relational Database. These are all in-demand technologies that should prove useful in your careers. Because quite a lot of this has been worked on, we expect that one team could complete it in 2 semesters or so.
2. In order to gather more data than just searching closed captions our **TV-Video Recording** app is being adapted to generate audio-to-text & video-to-text as well. We believe that our competitors miss a lot of data because they don’t have this technology yet. There are also more video sources that can be added such as Cable TV and online video streams. Software to be familiar with would be Unbuntu-Mate 20.04 & 22.04, C, Ffmpeg, possibly Python and MySQL Relational Database. This app has a lot of multi-process code and system calls. Video & Audio processing are topics you should find interesting and offer many careers. Because we have demos of both newer audio-to-text & video-to-text APIs working, we would expect that one team could at least get the audio-to-text & video-to-text working in 2 semesters or so.
3. Our **Radio-Audio-Recording** app is running but with an older speech-to-text engine that produces a transcript for searching. We have a newer better speech-to-text engine, but it is very CPU intensive so we need to complete the move to a more powerful recording machine. We hope to improve text quality by adding or improving phonetic, spell, grammar and punctuation checking. This technology could then be passed to our TV recorder in future semesters. We would also like to add more streaming audio such as Sirius Radio & podcasts. Software to be familiar with would be Unbuntu-Mate 20.04 & 22.04, C, Ffmpeg, possibly Python and MySQL Relational Database. There are lots of good career opportunities in audio processing. We are looking for one or more teams to advance this project as far along as they can in the time they have available.
4. The core of this DigiClips project is the **Search-Media-Engine-Website** where we & our clients can go to set up queries to have the data we are interested in sent to us or them automatically. The Search Engine finds and produces results for TV, Radio, Newspapers, Magazines, Social Media, Blogs & Web Media. We would like to add Cable TV, podcasts, YouTube, Sirius Radio, additional internet scrapeable media and more to our offerings. Adding more media analysis would also improve our reports. We need to add better security, error reporting, download capabilities, web scraping, email alerts, more query options, video editing and much more. DigiClips will be more profitable if it can serve more clients by automating as opposed to increasing our labor force. There are more career building options here than we can list in this summary. Software to be familiar with would be Unbntu-Mate 20.04 & 22.04, AWS, Ffmpeg API, Angular 13 (more info at angular.io), Nodejs, Express, React, Typescript, Node Graphics, Data Analysis and the MySQL Relational database. There is so much code here and so many possible projects of varying difficulty here **(see detailed project listing)** that we expect each team just to select a small part of this project, get familiar with the sections of code pertinent to your project and do your best to complete it in the time you have available.
5. In order to coordinate and keep all the project machines and apps running smoothly, we have an **Administration-Website**. It displays system analytics to alert administrators of problems & errors occurring on monitored machines. Administration of user accounts needs improvement. We would like to import more system analytic graphs from an Excel prototype into Administration & create new ones. More machines need to be monitored. We need to be able to import outside data for the SE to use. Administration of machines through config files and much more should be improved. This app is already saving us a lot of labor time and improving our ability to maintain our complex systems. There are more career building options here than we can list in this summary. What company doesn’t want to have cheaper & better administration. Software to be familiar with would be Unbntu-Mate 20.04 & 22.04, AWS, Ffmpeg API, Angular 13 (more info at angular.io), Nodejs, Express, React, Typescript, Node Graphics, Data Analysis and the MySQL Relational database. There is so much code here and so many possible projects of varying difficulty here **(see detailed project listing)** that we expect each team just to select a small part of this project, get familiar with the sections of code pertinent to your project and do your best to complete your project in the time you have available.

**IMPORTANT: For more information about our 100+ projects, our company and more check out our DIGICLIPS CAPSTONE PROJECTS file.**

Bob Shapiro

bobshapiro40@gmail.com

(303) 926-0334

Henry Bremers

hbremers@gmail.com

(303) 249-4676