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Open Source and Open Learning

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Open Source and Open Learning

Optional Cover Page Acknowledgements

Thanks to Frannie Miller, without whom this would not have happened. Thanks to Tehji Roogi and Caleb Crelia as well for helping make this happen.

Open Source and Open Learning

Ryan Beare^{a,*}, Vidhi Goti^a, Seth Trojacek^a

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Abstract: We are the Geospatial Information Systems Club from Texas AM University - Commerce in Commerce, TX. Over the past year, we have cultivated an incredible community of researchers, data analysts, programmers, and writers to make our club one of the top academic clubs on our campus. Our first project even won a first place award. How did we do it? We used Foss4G software. As beginners, we came together as a community of close friends, learned QGIS and undertook a project that highlighted and celebrated the rich 125 year history of our university. Together we continue to use QGIS to study such topics as gentrification, education scarcity, cattle migration, movement of our alumni over time, and many others. We take a different educational approach to learning. Rather than setting tight deadlines for large projects, we come together, we collaborate to solve problems. In addition to our use of QGIS, we have developed our own open source software, and we only use open source software when completing our projects. We want to show how learning GIS looks outside of the classroom, and how beneficial the community of problem solvers we've created has been to our university.

Poster Download: <http://scholarworks.umass.edu/foss4g/vol17/iss1/24>

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BACKGROUND

We are the Texas A&M University-Commerce Geospatial Information Systems Club, located in Commerce, Texas. Academic use of geospatial information systems is a common thing in American universities. This club takes the academic approach outside of the classroom, using open source software and technology. We decided to start this club as a university-wide opportunity to come together and recognize our heritage as one of the State's oldest learning institutions. We have done research spanning all of Hunt county, assisting the city of Commerce in research, as well as, parts of the greater Dallas area. Most recently, we have completed a project that placed all of our alumnus on a map of the entire world, which we completed using only open source software. We accomplished this by taking a different route than the traditional method of education. We applied Geospatial analysis to locate the alumni using QGIS. We claim that it may be the better way to learn Geospatial Information.

OUR APPROACH

Being one of the oldest learning institutions in Texas has allowed us to research a very large amount of data, which might not be possible for other schools who may not have been in existence. Since, Texas A&M Commerce has such extensive data on their alumni, we can provide a more holistic understanding of where our students have come from. Open source software, such as QGIS helps make research like this possible, because of how accessible it is. Our aim from the beginning has been to be as accessible as possible so that we can all leave our mark through collaboration

OUR RESULTS

The results we experience from practicing an open source attitude towards learning for two semesters have been beyond impressive. Overall, we are the fastest growing academic and research based club on our university campus. We expect the growth to continue into fall 2017. Through collaboration, participation, critical thinking and problem solving we have been able to recently complete the largest project of mapping over 164,000 of our school's alumni from all across the world. Our coding team has produced our own website, which we plan to launch in July, as well as two mobile games that will serve as fundraising for our club's future expenses.

OUR MEMBERS

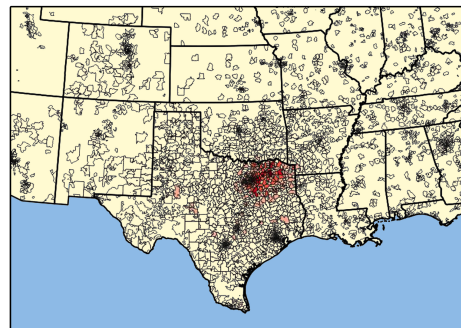
Today, our club is almost 20 members strong. Our members come from as near as Commerce, Texas to as far away as India. This helps us create a multicultural experience for everyone involved. Currently, no one in our club has previous extensive background in GIS.

Seth Trojacek – Seth is a certified Early Childhood Educator, and a current Computer Science Graduate student at Texas A&M University- Commerce, specializing in Artificial Intelligence. He also looks into the Education theory behind GIS and works on incorporating teaching principles to the groups projects.

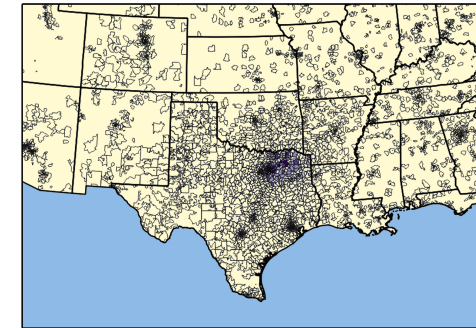
Vidhi Goti – Vidhi is pursuing her Master's in Business Analytics at Texas A&M University-Commerce. Prior to joining grad school, she worked at CRISIL- An S&P Global Company under structured finance domain where she worked on multiple technologies like Informatica PowerCentre, and SQL.

ALUMNI PROJECT

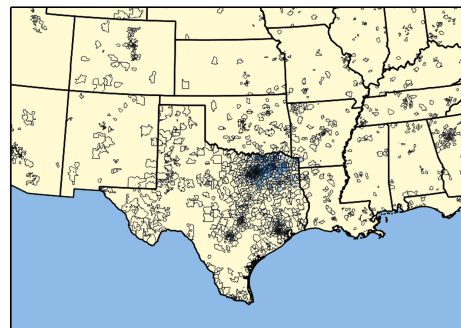
Below is the result of our first collaborative effort in which we came together and plotted Texas A&M University Commerce Alumni data. This project received a first place award at our school's Lion's Innovation Showcase competition.



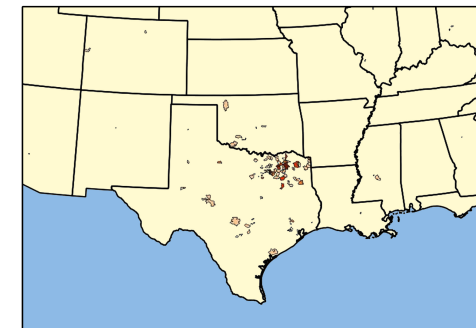
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