School of Informatics and Computing

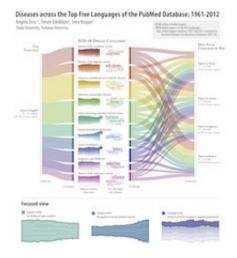
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Current and Former ILS Students Receive 'Best Student Entry' for Data Visualization Challenge at 2014 ACM Web Science conference

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Click for larger version By Heather Edelblute June 26, 2014

Bloomington, IN - This week, IU School of Informatics and Computing hosted the 2014 ACM Web Science Conference.

Doctoral candidate Angela Zoss, MIS student Trevor Edelblute, and postdoctoral researcher Inna Kouper (Ph.D.'11) were awarded one of only two Best Student Entries for their data visualization project titled, 'Diseases across the Top Five Languages of the PubMed Database: 1961 – 2012.'

The IU-led team focused their visualization project on diseases in the biomedical literature in English, French, German, Japanese and Russian between 1961 and 2012. Using a database maintained by the U.S. National Library of Medicine (NLM) at the National Institutes of Health (NIH), they mapped and visualized the titles of articles retrieved from the MEDLINE/PubMed database.

The initial dataset, compiled from the Scholarly Database hosted by the Cyberinfrastructure for Network Science Center in the IU Department of Information and Library Science, contained over 21,000,000 records and covered a time period between 1809 and 2013. After correcting erroneous or incomplete entries and noting a sparseness of publications during certain date ranges and languages, the team narrowed their sample to articles that were published in the top five languages between 1961 and 2012. They then developed a classifier to match publication titles to a comprehensive disease classification system, which resulted in 4.24 million publications being classified into nine broad disease categories.

The visualization combines large alluvial diagrams, which show distributions of publications in the top five languages over disease categories, and small streamgraphs, which show trends in publications for each disease category across the five languages. (see poster above)

The winning team was invited to present a poster of their project as well as participate in a Pecha Kucha presentation at the conference sessions.

About ACM Web Science Conference

Web Science studies the vast information network of people, communities, organizations, applications, and policies that shape and are shaped by the Web, the largest artifact constructed by humans in history. Computing, physical and social sciences come together, complementing each other in understanding how the Web affects our interactions and behaviors.

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