The Wayback Machine - https://web.archive.org/web/20070715001704/http://www.npaci.edu/online/v3.19/sw...

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Sociology Workbench Provides Tools for Analysis of Social Science Data

SAN DIEGO STATE UNIVERSITY - In an effort to make computational resources more widely accessible and relevant to sociologists and social scientists, the <u>Education Center on Computational Science and Engineering</u> at San Diego State University (SDSU) has been developing the Sociology Workbench (SWB). Available on the Web, the site is a collection of online resources including analysis tools, datasets, sociology research, results of public surveys, discussion groups, and pointers to professional organizations.

The Ed Center is part of NPACI's collaborative education, outreach, and training activities with the National Computational Science Alliance, offering students and faculty access to state-of-the art programs and technologies being developed throughout NPACI and the Alliance. "At SDSU, many of our constituents are from the College of Arts and Letters," says Kris Stewart, director of the Ed Center. Meanwhile many of the PACI tools are focused on the 'hard' sciences. We're not normally in the development business, but there was a definite need at State for tools that were applicable to the social sciences." SWB was modeled after other workbenches created within PACI, including the Biology Workbench.

Statistical analysis is an integral part of research in the social sciences, using response data generated from public opinion surveys, medical records, exit polls, and other similar sources. Frequently, thousands of qualitative responses must be analyzed to generate rules -- statements extracted from the data that provide explanations of user-specified variables and values -- that are accurate and complete. Rules can then be applied to the population at large for the purpose of assessment and generalization beyond the sample.

The SWB package focuses on techniques to extract such explanatory rules, and on integration of other relevant resources on the Web. "The major advantage of our workbench is its ability to examine datasets supplied by the user," says Ilya Zaslavsky, the Ed Center's Geographic Information Systems (GIS) staff scientist. A tutorial on the site guides users through the procedure to convert their data to a format compatible with the SWB analysis tools.

Zaslavsky led development of the SWB, working with student programmers John Bajic, Santi Anousaya, Jerry Kuzminsky, Kamil Saykali, Tom Handal, Nattha Flanagan, and Joelyn Brickner. The current version (0.5) reuses some of the code written by Zaslavsky for the first version of <u>determinacy analysis software</u>.

SWB version 1.0 is planned for fall 1999, and will include secondary variable construction, combinatorial rules tables, and processing of numeric variables. With the implementation of XML query output and VML mapping of geographic variables in version 2.0, an XML-enabled browser, such as Internet Explorer 5.0, will be required. Currently, SWB runs on Netscape 4.05 (or higher) or Internet Explorer 4.0 (or higher).

The Sociology Workbench is available from the Ed Center site at http://edcenter.sdsu.edu/, and is still under development. To test the tools and datasets, a user can currently use "guest" and "guest" as the login and password. In the future, users will register with the site. Registration instructions are available from the homepage.

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