

ANALYTICS COMMUNITY OF PRACTICE

MONTHLY NEWSLETTER



Hello, Analytics Community of Practice Members,
The ACP is a large growing community of members from across the USC system. This month we highlight ACP member Ehsan Soltanmohammadi, for his Covid-19 interactive dashboard. Our Data Viz of the Month is from the site ThePudding and gives interesting insights on pocket sizes in pants. Finally, we have a new list of data and analytics-related events that are completely free to attend!

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ACP FEATURE MEMBER:

Ehsan Soltanmohammadi

Role at USC: Data Management and Metric Coordinator for DoIT

What role does Analytics play in your office?

Analytics plays a pivotal role in uncovering hidden patterns and insights from research data, particularly in academic and research contexts. In my office, we strive to optimize our analytics capabilities by leveraging available resources and exploring novel methods to enhance the quality of analyses while minimizing time and cost expenditures.



What role does analytics play in higher education, and what advents/technologies do you see on the horizon? Analytics has become an integral component of higher education research, and its importance continues to grow as new tools and methods are developed. As a PhD student, I have observed a gap in the application of new analytical tools and the requisite skills needed to employ them effectively, particularly in non-technical fields. Consequently, the popularity of applications that can simplify the complexity of analytical tools is likely to increase. In the near future, there may be a rise in the use of user-friendly programming languages and graphical user interface-based analytical tools in both technical and non-technical fields.

Favorite data visualization and/or analytics tools and why? I am a big fan of the python programming language as I believe it provides the capability and creativity in application to innovate and expand the usage. I also take advantage of relational databases such postgres and MySQL and I love working with Tableau visualization to create simplified reports for users. And also I found analytic resources provided by cloud services such Azure and AWS very useful in projects. •What other reporting software are you interested in learning? I am looking forward to exposing myself more in cloud services and take advantage of those in future projects.

What inspired you to make the COVID-19 dashboard? I recently came across an interactive dashboard that presents a simplified version of COVID reports, which is capable of being updated upon request. The dashboard provides critical insights resulting from various analytics processes, making it a valuable resource for the general public. This dashboard serves as an excellent example of the power of web applications that integrate analytics and visualizations

What do you hope this dashboard will teach others? Machine learning algorithms, such as classification and regression, can be applied to data pipelines based on the data and research question at hand. Interactive dashboards can then present the results in an easily understandable format. For instance, a web application can be designed to predict the number of COVID-positive tests using machine learning models. Similarly, this approach can be implemented on other datasets to generate desired outcomes

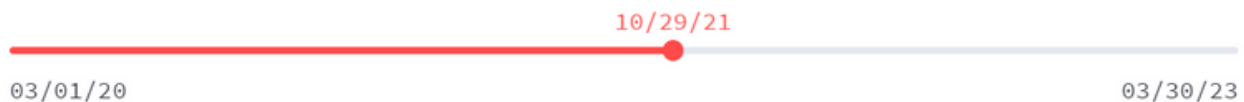
Student Employee Develops Interactive Data Dashboard

Ehsan Soltanmohammadi, a Ph.D. student who works with DoIT, created a web application that allows for automated data visualization in an interactive dashboard. The application can implement any desired machine learning algorithm on data. It provides design customization and allows users to create an array of different graphs or visualization that are automatically updated and can include descriptions, images, and more. Even better, results can be shared with a simple URL. To showcase the interactive dashboard, Ehsan used COVID-19 data found at <https://covidactnow.org/> to run heat maps, compare vaccination and death ratios by states, and more. It can be customized based on the use case. Check out the interactive dashboard, which is a wonderful example of the innovative and quality work taking place within IT at USC.

Covid 19 Analysis across US

Geographic Heat Map related to Vaccination and infection ratio

Specific time in range from 03/01/2020 to Today



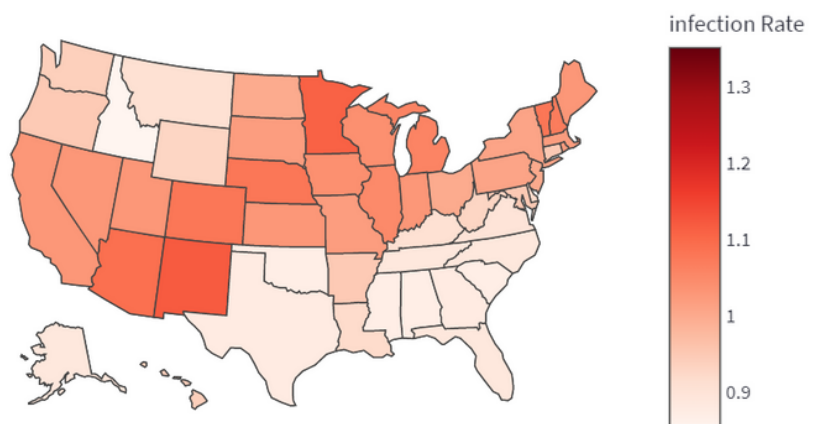
Geomap Graphical about:

infection Rate

The dashboard allows users to pick a range of dates between March 1st, 2020, and March 30th, 2023. The user can also choose whether they want a visualization about infection rates or vacation rates. The map of the US below is the result of the values I entered. The dashboard will also give real-time analysis of new case trends, positive test ratio, vaccinated initiated ratio, and

intercorrelation heatmap on the state you select. Go to the sidebar located in the upper left corner of the dashboard and select the arrow to see a menu option of states to pic. He also includes a comparison option to visualize the difference between death ratios and vaccination ratios between states.

Distribution of infection Rate at 2021-10-29

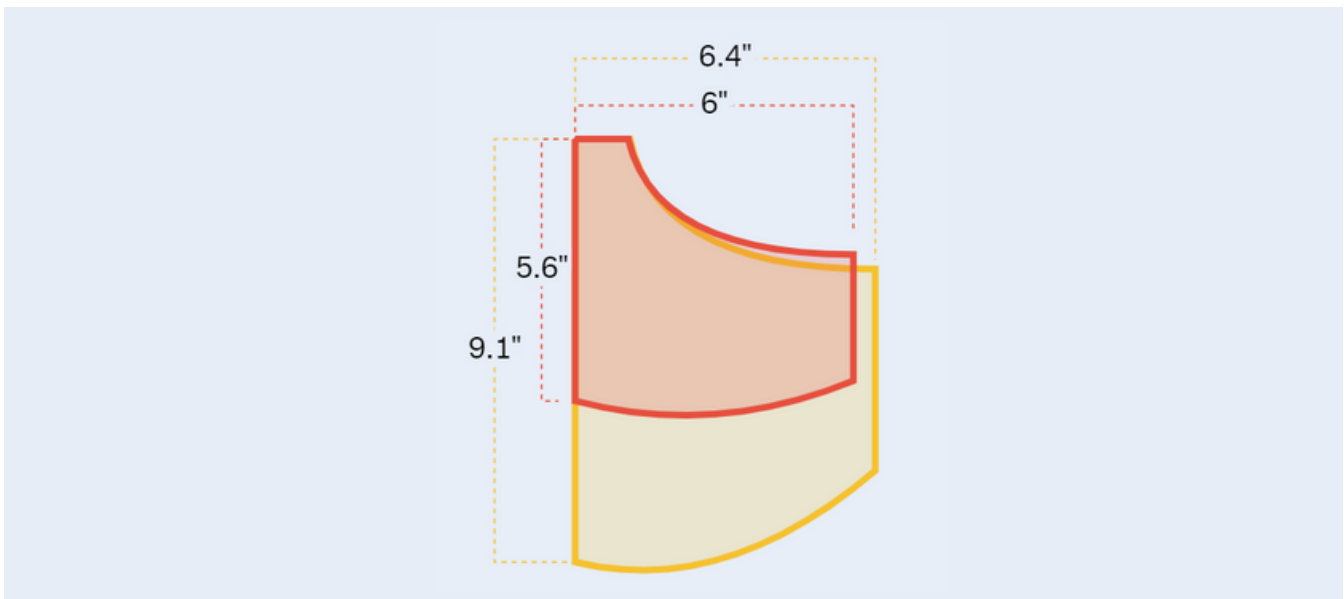


[Click here to explore the dashboard](#)

VIZ OF THE MONTH



There are few things more frustrating than collecting your belongings only to realize that the pockets in your pants are too small to hold them. Or worse, the fabric designed to look like a pocket is merely for decoration and doesn't open at all. This is a common frustration among women and typically we wonder why men's pockets are able to fit more. Jan Diehm & Amber Thomas decided to measure the pockets in men's and women's pants in 20 of the US's most popular blue jeans brands to find out just how different the sizes of men's and women's pockets are.

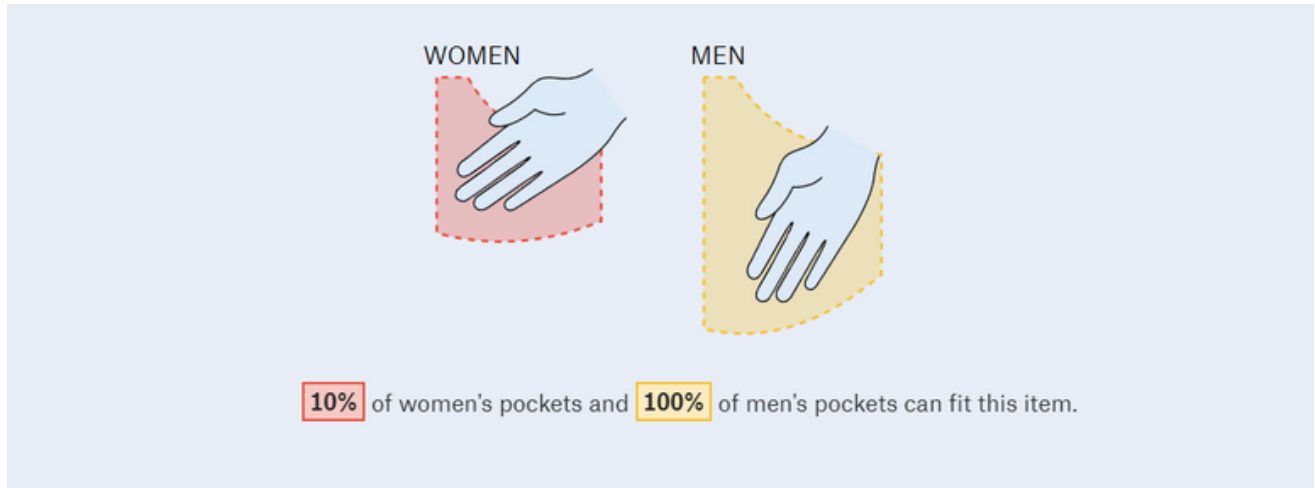


They concluded from their sample On average, the pockets in women's jeans are 48% shorter and 6.5% narrower than men's pockets. Jan Diehm & Amber Thomas decided they also wanted to know beyond the obvious measurement differences, how functional the pockets were for men and women. What items can they fit?

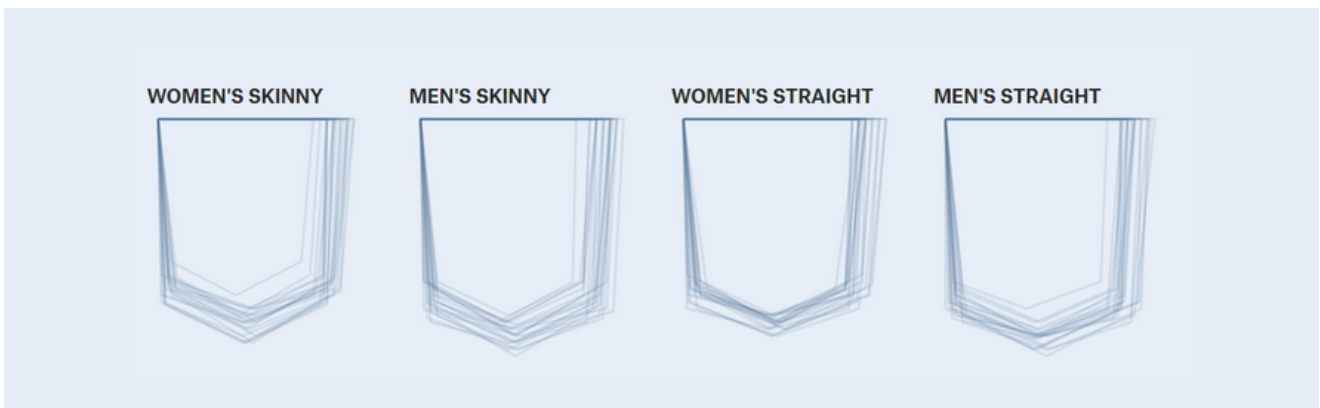
[Click here to explore the dashboard](#)

VIZ OF THE MONTH

On the site, they programmatically determined whether various everyday items could fit in an otherwise empty pocket in jeans that aren't being worn. They tested the pocket size without people wearing the pants because they felt it was a more accurate test. As you see below result returned that out of the 20 pairs of women's pants, only 10% could fit an average-sized female hand.



They tested other objects like popular phones, wallets, and various other everyday items to get a complete understanding of just how undersized women's front pockets are. Check out the complete study on ThePudding.com for the results. Overall, the difference in back pockets between men and women is minimal but exists. So, begs a new question why do fashion designers make women's front pockets significantly smaller but are less obvious with back pockets?



[Click here to explore the dashboard](#)

EVENTS

- Composite AI Using Machine Learning in Optimization Formulations 7
- Tableau Data Management Virtual Test Drive 7
- DAWG Data Engagement Conference 8
- HighEdWeb 2023 Analytics Summit 9
- Cognos Advanced Report Authors training 9

If your looking for more Tableau related events [click here](#)

COMPOSITE AI USING MACHINE LEARNING IN OPTIMIZATION FORMULATIONS

APR. 4TH @10:00 - 11:00AM

LOCATION: SAS Virtual Event

This webinar is for data scientists and business leaders who currently license SAS Optimization and/or SAS Visual Data Mining and are interested in learning how to incorporate ML models into optimization formulations to solve complex business problems in any industry.

[Register now](#)

TABLEAU DATA MANAGEMENT VIRTUAL TEST DRIVE

APR. 5TH @10:00 - 11:00AM

LOCATION: Tableau Virtual Event

Join this workshop for an introduction to Tableau Data Management: Tableau Catalog and Tableau Prep Conductor. As modern, self-service analytics culture grows, so does the data that enables it.

In this workshop, you will learn: The necessity of good Data Management, the guiding principles of Data Management and how to use components of Data Management.

[Register now](#)

DAWG DATA ENGAGEMENT CONFERENCE

APR. 12-13TH 8:00-4:30PM

LOCATION: [Watt Family Innovation Center Auditorium at Clemson University](#) or Online

The DAWG Leadership Team and the Engagement Committee have been working hard to organize the 2023 Data Engagement Conference for Clemson University. We will be joined by noteworthy guest speakers for this two-day event. All of the sessions will be held in person, but there will be a virtual option as well. Each session will be recorded.

The event will include sessions about data governance, data strategy, and opportunities to partner with campus resources. Conference engagement to include round table discussions on ideas and best practices with internal partners.



[Register now](#)

HIGHEDWEB 2023 ANALYTICS SUMMIT

APR. 25TH @1:00 - 2:00PM

LOCATION: Virtual Event

Learn how to use analytics more effectively in your work on college and university campuses. Gain a better understanding of the varied ways analytics inform your work — and the best practices for success.

Sessions topics will include website analytics, social metrics, SEO, data reporting and more.

[Register now](#)

COGNOS ADVANCED REPORT AUTHORS TRAINING

APR. 27TH @10:00 - 11:00AM

LOCATION: Teams Virtual Event

The Cognos Advanced Report Authors training will illustrate and reinforce key concepts of advanced report authoring techniques, including enhancing, customizing, managing, and distributing professional reports using relational data models. Advanced Report Authors will learn how to create highly interactive and engaging reports that can be run offline by creating saved report outputs.

[Register now](#)

CONTRIBUTING TO THE COMMUNITY

Did You Know?

The new ACP [Microsoft Teams Site](#) is a great way to spread the word about coming events and opportunities! In an effort to reduce email traffic, we encourage you all to send communications via the Microsoft Teams Site. All events shared will also be included in the newsletter, which will continue to go out via the listserv.

As always, the following links and email addresses can be used for the specified purposes:

- To contact the list owner: ANALYTICS-request@LISTSERV.SC.EDU
- [Click here](#) to join the Analytics Community of Practice

Please send us visualizations suggestions for the viz of the month!

If you would like to suggest a visualization for next months viz of the month be sure to share it with us at any one of our communication channels! We are software and tool agnostic so you can send us vizzes from across the spectrum of BI technologies. The visualization can be something you created, a coworker, or something you found. We look forward to seeing your suggestions!

LOOKING FOR MORE EVENTS?

University Libraries offer students, faculty, staff and the entire community opportunities to engage with data. They have a new list of data related events every week, just follow the link below!

[Click here for more events](#)