HPCC Systems and COVID-19

HPCC Systems and big data analytics are synonymous and the availability of information about COVID-19 provides the perfect opportunity for us to help provide quality results from the analysis of the data available. As well as creating our own COVID-19 tracker, we are also working with and supporting academics in the USA and UK who are working on research projects to help us understand this pandemic and find ways to overcome some of the problems faced globally. Below are some of the resources available you can use to find out more about the valuable work that is being done and how HPCC Systems is being used to provide insights into the data that is available.

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<tr>
<th><strong>HPCC Systems COVID-19 Tracker</strong></th>
<th>See a world map showing statistics for countries around the world including contagion risk, infection risk and deaths. This tracker also shows trends and hotspots, providing an explanation of the current state of the spread of COVID-19 in each country.</th>
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<td><strong>COVID-19: Is there a better way to tell the story?</strong></td>
<td>Read this blog by the leader of our machine learning library project, Roger Dev. Roger provides a detailed description of the HPCC Systems COVID-19 tracker and as well as talking through how it was built and the techniques used to analyse the data available.</td>
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<td><strong>HPCC Systems COVID-19 GitHub Repository</strong></td>
<td>Download the sources and find out more about the goals and background of the HPCC Systems COVID-19 tracker project. The readme also includes an in-depth look at the models used, filtering process, metrics, commentary, data pipeline and more.</td>
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<td><strong>Covid-19 Enterprise Data Lake Presentation</strong></td>
<td>Watch Arjuna Chala, Lili Xu and Roger Dev as they show a product demonstration of the HPCC Systems COVID-19 tracker and listen to them speak about the development of the metrics used, the architecture of the user interface architecture, the data lake architecture and data flow as well as the future plans for this project.</td>
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<td><strong>An Evaluation of Mathematical Models for the outbreak of COVID-19</strong></td>
<td>In this paper, published in May 2020, Ning Wang, Yuting Fu, Hu Zhang and Huipeng Shi present some critical reviews on mathematical models used during the outbreak of COVID-19. The aim of this research is to look at whether it is possible to develop reliable epidemiological models to forecast the evolution of the virus and estimate the effectiveness of various intervention measures and their impacts on the economy.</td>
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<td><strong>Optimal Lockdown Control for COVID-19</strong></td>
<td>Yuting Fu is a PhD student working with Professor Hanqing Jin and Dr Ning Wang at the Mathematical Institute, University of Oxford. One of the projects they have been working on in 2020 involves looking at the effect of people's working practices and consumption on the spread of the COVID-19 pandemic, and how to control the lockdown rate to maximize the utility of the whole society, while people also make decisions for their own benefits.</td>
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<td><strong>Smart Learning &amp; Market Insight in Hospitality Presentation</strong></td>
<td>David Dasher is the CTO of CPL Learning. David has been using HPCC Systems for many years and is a regular speaker at our annual Community Day Summit. In 2020, he returned to speak about how they are using HPCC Systems to deliver training and analysis within the hospitality sector in the UK. In this presentation, he also looks at a new suite of API’s powered by HPCC Systems designed to help hospitality customers gain insight into life during COVID-19, taking nearly 5 billion data rows spanning years to compare current performance with previous years and months. He also looks at the impact of the UK Government’s EatOutToHelpOut Scheme.</td>
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Chris Connelly from North Carolina State University, has been carrying out research into player performance for a number of years. In 2020, he has been focusing on using HPCC Systems to collect and analyze all the various data streams from questionnaires, training loads from practice and weight room sessions, as well as testing for strength, speed, and fitness. The goal is to create a 360 degree view of athlete wellbeing to ensure they are performing at their highest potential. Also, during times of a pandemic, he provides a glimpse of how data is being used to help make decisions around athletes returning to play during COVID-19. Regaining fitness and strength and rebuilding resilience to keep athletes healthy and ready to perform at a high level once again is an important consideration during these times.