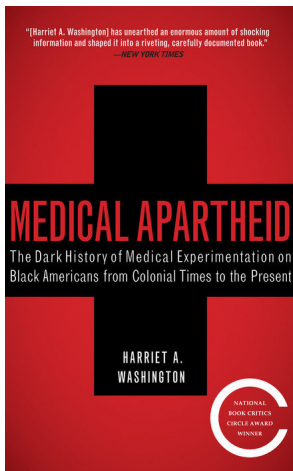


Surgery News

systemic racism on individuals as well as on culture and society. It has been a great first read for the group, as it sets a common conceptual framework and language that we can use for future discussions.

We will be wrapping up discussion of this book in the coming weeks. If Department of Surgery staff, faculty or trainees are interested in joining us it's not too late! It is by no means required to attend all of the small group sessions and we would love for any interested parties to join when and if they are able. If you would like to join, email Ellison Fidler at ellisonf@uw.edu to be added to our email list.



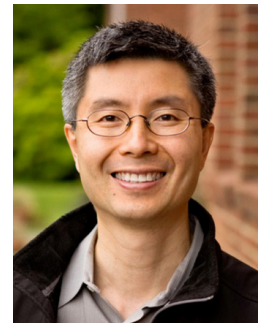
The next work that we will be reading is the book "Medical Apartheid: The Dark History of Medical Experimentation on Black Americans from Colonial Times to the Present" by author Harriet Washington. This history is a searing but necessary look at the ways in which the medical establishment has used and mis-used black Americans, which continues to impact healthcare today. Please consider reading and joining us for what will surely be an important discussion.

TECHdesk HELPS UW MEDICINE WITH COVID-19 RESEARCH IN THE CLOUD

A little over two years ago, a group of UW Medicine faculty and staff met with a team from Microsoft Research-Cambridge (MSRC) to explore a data science partnership. MSRC proposed to combine the clinical and data science expertise at UW Medicine with the expertise of MSRC in data science and machine learning to solve a long-standing problem – [perio-perative hypotension](#). The combined team would apply machine learning models to a large and unique UW Medicine clinical dataset to identify risk factors and predictors for the development of perioperative hypotension. The hope was to create an algorithm that could predict the risk of perioperative hypotension better than a trained clinician.

The team had a problem, however. MSRC did not want to accept the risk of having the UW Medicine dataset transferred to them. UW Medicine did not have a safe way for MSRC researchers to log into UW Medicine systems to access to the data.

This is where Rob Fabiano (right-top) and Roland Lai (right-bottom) of TECHdesk came in. Over the course of seven months, from mid-2019 to early 2020, TECHdesk built what came to be known as a Digital Research Environment (DRE) in the [Microsoft Azure Cloud](#). Many people use [cloud computing](#) every day. Whenever you do a web search, send email from your UW Medicine email account, or watch a show on a streaming video service, you are using cloud computing. Cloud computing has a key feature that makes it perfect for data science research – it is elastic. That is, you can purchase as much computing storage and power for as long as you need it. When your project is over, you just turn it off and stop paying for it.



TECHdesk worked with UW-IT, UW Medicine ITS Security, UW Medicine Compliance, and Microsoft to overcome numerous regulatory, security, and technical challenges building the DRE. Many of these issues UW and UW Medicine had never encountered before – from the mundane, like creating a process to accept the Azure computing credits that Microsoft was offering, to extremely complex, like connecting UW networks and servers to the Azure cloud in a HIPAA-compliant manner.

Just weeks after the first DRE launched, the nation went into lockdown in response to the COVID-19 pandemic. The MSRC and UW Medicine teams saw an opportunity to partner again, this time to find ways to more efficiently allocate limited resources to care for COVID-19 patients. The research team again approached TECHdesk for help. TECHdesk was able to deploy another DRE, and leverage all they had learned from the first experience to do it much more quickly. As a result of this collaboration, UW Medicine can now do data science on ePHI in the cloud.

Manuscripts for both research projects have been submitted for publication. The UW eScience Institute has published a [detailed article](#) if you want to learn more.

Roland Lai
IT Director
Department of Surgery