Chris Lindner
Product Science Manager at Indeed
"The Data Science Job Market Through the Eyes of Indeed"
At Indeed, we help people get jobs, including data science jobs! I'll explore what Indeed's data has to say about how long it takes for DS jobseekers to find a role, how many jobs they're applying to, and who exactly is getting hired.

James Guillochon
Robotics Engineer & Data Scientist at Berkshire Grey
"From black holes to data science to robots: tips and tricks for transitioning into industry"
The transition from academia to industry can be jarring, with major differences in how one applies for positions, culture, and expectations. Data science and programming skills are important components that make astronomers and astrophysicists particularly appealing to companies that are desperate to hire technical talent, but companies are also looking to hire people who are adept at the many of the soft skills that an astro career fosters. I will highlight which skills I thought were most important by discussing my own personal journey that saw me starting as a PhD in astrophysics, moving to a postdoc at Harvard, and eventually into my current industry position. I'll focus on what resources and strategies I found helpful in making the transition, and how I might expect the process to be different for others whose paths were not the same as my own.

Jeremy Ritter
Senior Data Scientist at SparkCognition
"A Neuro-evolutionary Approach to Automated Model Building"
There is little intuition available to aid in designing an optimal neural network architecture. A brute force random approach may yield improvements but is unlikely to find the optimal architecture without an exhaustive search. Instead a genetic algorithm (NEAT) is employed to evolve a network architecture automatically. I summarize the general neuro-evolutionary approach and introduce a Python-based cloud software service that you can use to help automate the model building process for your own data.

John Wu
Postdoctoral Fellow at Johns Hopkins University
"Insights on Galaxy Evolution from Computer Vision"
The study of galaxies has benefited tremendously by advancements in deep learning and computer vision and by the advent of deep, wide-area, multi-band surveys. Details about the physical processes that drive the growth and evolution of galaxies are encoded in their morphological features, but traditionally it has been difficult to parameterize these complex shapes in a realistic manner. Deep convolutional neural networks (CNNs) provide a powerful way to leverage galaxies' morphological information at the pixel scale, and such representations are able to predict galaxy properties extremely well directly from imaging. I will present recent results on connections between galaxy morphology and gas metallicity, neutral atomic hydrogen content, and environmental overdensity; I will also discuss techniques for interpreting what a CNN is able to learn about galaxy evolution.

Jonathan Whitmore
Data Science Manager at Apple
"Future Career Success Starting from Your First Tech Job"
Your life is going to unravel in an unpredictable way. Even attempting to predict your career trajectory for the next five years is not only impossible, it might be harmful. I will advocate a number of approaches to thinking about your future career that can maximize your future flourishing.

Joshua Miller
Director, Data Science & Analytics at Samba TV
"Utilizing Machine Learning to Predict TV Viewership"
Samba TV leverages data collected from millions of opted-in households to analyze trends in TV viewership, offer content recommendations and generate insights. Using our connected TV data cloud, we are able to serve digital advertisements based on a household's previous TV viewing habits. In this talk, I will discuss how we have scaled this capability beyond the Samba TV universe by applying machine learning techniques to predict whether a household without a Samba-enabled television is likely to watch specific TV networks, programs or genres.

Kevin Moore
Lead Data Scientist at Salesforce
"Automating Your Machine Learning Pipelines: What could possibly go wrong?"
Machine learning applications at Salesforce use a wide variety of customer data that is highly customizable. In this talk, I discuss some challenges of designing automated machine learning pipelines that can deal with custom user data that it has never seen before, as well as some of our solutions for feature engineering and selection. I'll also touch on some of the engineering and design challenges we've had, and some best practices we've developed around testing.

Padma Yanamandra-Fisher
Senior Research Scientist at Space Science Institute
"Data Science in Planetary Sciences"
The concept of Citizen Science, of allowing the public to perform simple visual examination of vast data sets according to a set of guidelines, is now becoming multi-dimensional, corresponding to the experience level of participants in the project. The vast data collections of the amateur astronomers spanning many years are untapped for the wealth of information. The interactions of amateur astronomers with professional astronomers have changed significantly in the digital era, from an occasional interaction of exchanging individual images to a sustained collaboration to coordinated global networks of amateur astronomers. Today, amateur astronomers, with sophisticated equipment and software, provide a large source of manpower, or extension of the professional astronomer's group and a vast collection of data that provides both legacy and temporal information. The PACA observing campaigns identified several common data issues that needed to be addressed to maximize the science return: (a) consistent standards and policies for acquisition of data; (b) data format; its collection, quality assessment, collation and subsequent analysis; (c) access and use by both professional and amateur communities and (d) long term archival with sustained maintenance. Various solutions and their efficacy are being studied by PACA, to provide a one-stop portal for these issues.

Taka Tanaka
Sr. Manager, Business Analytics at WW
"The Data Teams at WW: Bringing cutting edge tools to an establishment business"
Founded in 1963 around in-person social networks for weight management, WW (formerly Weight Watchers) is today an international corporation whose offerings include a digital app, a members-only social network, and personalized remote coaching. In late 2019, I joined WW to build a new Business Analytics team that guides company strategy using data science and research. I'll talk about this team, its work, and the skills involved (many of which might be cultivated in a career in astronomy). I'll also discuss the broader WW data organization, how we are growing, and the work we do—including some neat open-source projects.