

<i>Time (Day and topic of the day)</i>	<b>Monday, 12.09</b>  <i>Fundamentals of Machine Learning (ML)</i>	<b>Tuesday, 13.09</b>  <i>Applications of Deep Learning in Plant sciences</i>	<b>Wednesday, 14.09</b>  <i>ML in plant breeding</i>	<b>Thursday, 15.09</b>  <i>ML in ecology and soil sciences</i>	<b>Friday, 16.09</b>  <i>ML in agriculture</i>
		<b>Breakfast</b>	<b>Breakfast</b>	<b>Breakfast</b>	<b>Breakfast</b>
<b>08:00-09:00</b>	<b>Arrival and check-in from 08:00</b>	Exciting projects in Plant Sciences using ML <b>Prof. Jan Dirk, Dept. of Civil, Env. and Geomatic Eng., ETH</b>	<b>(08:00-08:30)</b> Deep learning for plant genomics and crop improvement. <b>Dr. Hai Wang, China Agricultural University, Beijing, China, (online)</b>  <b>(08:30-09:00)</b> Identification of novel short protein coding genes in prokaryotes by proteogenomics – implications for biocontrol. <b>Dr. Christan Ahren, Agroscope</b>	Data mining and ML in macro-ecological research. <b>Prof. N. E. Zimmermann, WSL</b>	ML & modelling in the context of crop phenotyping. <b>Dr. Andreas Hund, ETH Zürich</b>
<b>09:00-10:30</b>	<b>(09:15-09:30) Welcoming session</b>  <b>(09:30 - ) Hands-on programming session:</b> The basics of phyton programming <b>Dr. Carol Alexandru, UZH</b>	The fundamentals of Deep Learning. <b>Prof. Fernando Perez Cruz, ETH and SDSC</b>	Machine learning in plant breeding. <b>Dr. Aalt-Jan van Dijk, Wageningen University</b>  <b>Hands-on programming session:</b> Predicting plant gene interactive networks using phyton. <b>Dr. Aalt-Jan van Dijk, Wageningen University</b>	<b>(09:00-09:45)</b> Using ML to predict ecosystem-atmosphere fluxes. <b>Dr. Benjamin Stocker, ETH</b>  <b>(9:45- ) Hands-on programming session:</b> Applying ML on eddy covariance data using R. <b>Dr. Benjamin Stocker, ETH</b>	<b>(09:00-09:30)</b> To be announced  <b>(09:30-10:00)</b> Machine learning of transcriptome data in natura: drought as a trigger for flowering in aseasonal tropics. <b>Kentaro Shimizu, UZH</b>  <b>(10:00-): Hands on programming session</b> for the Hackathon work
<b>10:30-11:00</b>	<b>Coffe Break</b>	<b>Coffee Break</b>	<b>Coffee Break</b>	<b>Coffee Break</b>	<b>Coffee Break</b>
<b>11:00-12:30</b>	<b>Continued</b>	<b>Hands-on programming session:</b> Applying DL using phyton. <b>Prof. Fernando Perez Cruz, ETH and SDSC</b>	<b>(11:00-11:30)</b> Image-based plant phenotyping using deep learning. <b>Dr. Gert Kootstra, Wageningen University</b>  <b>(11:30-12:30) Hands-on programming session:</b> Image-based plant phenotyping. <b>Dr. Gert Kootstra, Wageningen University</b>	<b>Continued</b>	<b>Continued</b>  <b>(11:45-12:30)</b> Agricultural robotics. <b>Prof. Stefano Mintchev, ETH Environmental Robotics Laboratory</b>
<b>12:30-13:30</b>	<b>Lunch Break</b>	<b>Lunch Break</b>	<b>Lunch Break (plus coffe)</b>	<b>Lunch Break</b>	<b>Lunch Break (plus coffe)</b>

13:30-15:00	The fundamentals of Machine Learning. <b>Prof. Manuel Günther, UZH</b>	<p><b>(13:30-14:00)</b> Deep Learning for Plant Identification <b>Dr. Michael Rzanny, Max Planck Inst. for Biogeochemistry, Germany</b> (online)</p> <p><b>(14:10-14:40)</b> Deep Learning in remote and proximal sensing and it's application in crop sciences. <b>ETH Crop Science group</b></p> <p><b>(14:45-15:15)</b> Detecting deforestation from satellite images using DL. <b>Dr. Thales Sehn Körting, National Institute for Space Research, Brazil</b> (online)</p>	<b>(13:30-14:30, 7:30am in the US)</b> Interpretable strategies in plant genetics and genomics. <b>Prof. Shinhan Shiu, Michigan State University, USA</b>	<p><b>(13:30-14:00)</b> Using Machine Learning for spatial mapping demonstrated with soil maps <b>Dr. Madlene Nussbaum, University of Bern</b></p> <p><b>(14:00-15:00) Hands-on programming session:</b> Spatial mapping using R. <b>Dr. Madlene Nussbaum, University of Bern</b></p>	<p><b>(13:30-13:50)</b> To be announced...</p> <p><b>(13:50-14:10)</b> TraitSpotting, drone-based phenotyping. <b>ETH Crop science group</b></p> <p><b>(14:10-14:30)</b> To be announced...</p> <p><b>(14:40-14:50)</b> Hackathon team presentations Team 1 and 2 (5-5 min)</p> <p><b>(14:50-15:00)</b> Hackathon team presentations Team 3 and 4 (5-5 min)</p> <p><b>(15:00-15:30)</b> Hackathon winner announcement &amp; award ceremony</p>
15:00-15:30	Coffee Break	Coffee Break (only 15 min)		Coffee Break	Wrap up
15:30-18:00	<p><b>(15:30-17:00)</b> ML theory continued and <b>Hands-on programming session</b> using phyton. <b>Prof. Manuel Günther, UZH</b></p> <p><b>(17:00-17:30)</b> Introduction to the Hackathon work (online) <b>Sharada P. Mohanty, AI Crowd</b></p>	<p><b>(15:30-16:00)</b> Deep Learning for Image-Based Plant Disease Detection. <b>Sharada P. Mohanty, AICrowd</b></p> <p><b>(16:00-17:30) Hands on programming session</b> for the Hackathon work (online via Slack)</p>	<p><b>15:15-16:15 Excursion: Guided tour at the Einsiedeln Abbey's bibliothek.</b></p> <p><b>Free afternoon</b></p>	<p><b>(15:30-16:00)</b> Predicting plant diversity and endemism using ML models. <b>Dr. Andrea Paz, ETH Crowther lab</b></p> <p><b>(16:00-16:30)</b> BioDetect: Deep Learning for Biodiversity Detection and Classification. <b>Dr. Luca Pegoraro, WSL</b></p> <p><b>(16:30-17:00)</b> To be announced...</p> <p><b>(17:00-18:00) Hands on programming session</b> for the Hackathon work (online via Slack)</p>	
18:00-19:00	Dinner	Dinner	Barbecue	Dinner	
19:30-	Poster Session Welcome Aperitif	Hackathon Work	Free Evening	Hackathon Work	