

Week 33		Monday 10 Aug	Tuesday 11 Aug	Wednesday 12 Aug	Thursday 13 Aug	Friday 14 Aug	Saturday 15 Aug	Sunday 16 Aug
Location and host(s)		Copenhagen UCPH, DIKU	Copenhagen UCPH, IFSV	Copenhagen UCPH, DIKU	Aalborg AAU and AU	Aalborg AAU	Aalborg	Aarhus
Programme	9:00-9:45	Opening remarks	Causal prediction for medical decision making: Methods and practice	Applications for patient trajectory modeling and causal inference	Why Bayesian Statistics?	Introduction to NLP and LLMs	Excursion to Vesterhavet	Free time in Aarhus
	9:45-10:30	Patient trajectory modeling from EHR data	The causal inference foundation		Bayesian models and MCMC	Low-resource NLP		
	10:30-10:45	Break	Break	Break	Break	Break		
	10:45-11:30	Keynote speaker	Keynote speaker	Rigshospitalet visit	Introduction to complex trait genetics	Clinical documentation as data		
	11:30-12:00	Transformer based models for EHR data	Exercise	EHR and radiological reports	Exercise: Estimating genetic architecture	Opportunities and challenges of NLP in healthcare		
	12:00-13:00	Lunch	Lunch	Lunch	Lunch	Lunch		
	13:00-13:45	Keynote speaker	Keynote speaker	Transportation from Copenhagen to Aalborg	Bayesian polygenic prediction	Group work: NLP use cases in healthcare documentation		
	13:45-14:30	State-space based models for EHR data	Exercise (group)		Bayesian fine mapping: From association to causal probability			
	14:30-14:45	Break	Break		Break	Break		
	14:45-15:30	Student talks	Wrapping up on exercises and presenting from groups		Exercise: PGS and fine mapping	Group work: Prototype implementation		
	15:30-16:15	Poster session						
16:15-17:00								
Social activities			Social activity TBA				Transportation from Vesterhavet to Aarhus	

Week 34		Monday 17 Aug	Tuesday 18 Aug	Wednesday 19 Aug	Thursday 20 Aug	Friday 21 Aug
Location and host(s)		Aarhus AU	Aarhus AU	Copenhagen AAU	Copenhagen UCPH (DIKU) and SDU	Copenhagen DTU Compute
Programme	9:00-9:45	Imaging as common denominator in neuroimaging	The validation gap in model and clinical deployment	Overview of unsupervised learning	Introduction to medical imaging modalities	Quantifying 3D microstructure from X-ray tomography
	9:45-10:30		Hands-on: Red team challenge	Group work: from clustering to generation	Unsupervised learning	
	10:30-10:45	Break	Break	Break	Break	Break
	10:45-11:30	Hands-on: LLM-assisted development for medical AI	Multimodal AI: Combining imaging with clinical data	Self-supervised learning models	Case studies: crowdsourcing and simulated data	Closing remarks
	11:30-12:00		Federated learning and the data problem			
	12:00-13:00	Lunch	Lunch	Lunch	Lunch	Lunch
	13:00-13:45	Segmentation challenges	When should AI make decisions?	Machine learning representations	Foundation models for brain imaging	
	13:45-14:30	Hands-on: Building segmentation models	Solving medicine with AI	Diffusion models for image generation	Foundation models for ultrasound imaging	
	14:30-14:45	Break	Break	Break	Break	
	14:45-15:30	Hands-on: Evaluating segmentation models	Transportation from Aarhus to Copenhagen	Group work	Transfer learning and fine-tuning of foundation models	
	15:30-16:15			Learning to see without being told: Representations in medical imaging		
	16:15-17:00	Hands-on: Presentation and discussion		Visit to Rigshospitalet (tentative)		
	Social activities		Social activity TBA			Summer school dinner

List of speakers

Anders BJORHOLM DAHL, DTU

Department of Applied Mathematics and Computer Science

Bruno Olivera, SDU

SDU Robotics

Hadrien Reynaud, Imperial College London

Department of Computing

Hans Moen, AAU

Center for Clinical Data Science

Jeremy Tan, AAU

Department of Health Science and Technology

Kim Beuschau Mouridsen, AU

Department of Clinical Medicine - Center of Functionally
Integrative Neuroscience

Lasse Riis Østergaard, AAU

Department of Health Science and Technology

Mads Nielsen, KU

Department of Computer Science

Martin Bøgsted, AAU

Center for Clinical Data Science

Melanie Ganz Benjaminsen, KU

Department of Computer Science

Mostafa Mehdipour Ghazi, KU

Department of Computer Science

Palle Duun Rohde, AAU

Department of Health Science and Technology

Pawel Michal Morzywolek, KU

Department of Public Health

Peter Sørensen, AU

Center for Quantitative Genetics and Genomics

Qingjie Meng, University of Birmingham

School of Computer Science

Theis Lange, KU

Department of Public Health

Thiusius R. Savarimuthu, SDU

SDU Robotics

Vedrana Andersen Dahl, DTU

Department of Applied Mathematics and Computer Science

Inspiration to Aarhus

Museums

- ARoS
- Moesgaard Museum
- The Old Town Museum
(All museums have entry fees)

Shopping

- The Latin Quarter
- Department Store Salling
(Check out the view at the Roof top)



Photo: Jakob Vingtoft, VisitAarhus

Your rainbow panorama, Olafur Eliasson, 2006-2011, ARoS Aarhus Art Museum

Photo: Maria Halse, VisitAarhus



Eat and drink

- BMO (bun with cheese)
- Danish cardemom bun
- Open sandwich

Board games and “hygge”

- Find a board game café in town

For more inspiration, see:
www.visitaarhus.com/

Nature

- Marselisborg Slot
- Marselisborg Dyrhave
- The Infinite Bridge

Summer activities

- The harbour area
- Bellevue Strand



Photo: Maria Halse, VisitAarhus

Inspiration to Copenhagen

Famous attractions

- Amalienborg Slot
- The Little Mermaid
- Assistens Kirkegård
- Tivoli (entry fee)
- Christiania

Summer activities

- Amager Strandpark
- Islands Brygge havnebad

Eat and drink

- Torvehallerne
- Broens gadekøkken



Photo: ASTRIDKBH, Wonderful Copenhagen

For more information, see:

www.visitcopenhagen.com/

www.wonderfulcopenhagen.com/

The Danish cardemom bun can be found in most bakeries in the three cities.



Photo: Daniel Rasmussen, Wonderful Copenhagen



Photo: Rasmus Hjorthøj, Utzon Center

Inspiration to Aalborg

Famous attractions

- Utzon Center
- Kunsten Museum of Modern Art Aalborg
- Aalborgtårnet
- Musikkens hus
(Entry fees may occur)

Summer activities

- Vestre Fjordpark

Eat and drink

- Aalborg Street Food

For more information, see:

www.enjoynordjylland.com/aalborg