ISTAART Immersives: AI in Alzheimer's: From Data Pipelines to Explainable Analysis

Friday, July 10, 2026 | 8 a.m. - 12 p.m.
Aurora 1 — InterContinental — London, United Kingdom
All times are in British Summer Time
In-person attendance only

Overview

Artificial intelligence (AI) is transforming everyday life and reshaping how we study the human brain. In medical neuroimaging, AI supports automated image processing, detects subtle disease patterns, and may substantially change how Alzheimer's disease (AD) is diagnosed in clinical practice. This workshop - co-organized by the ISTAART Neuroimaging and Sex & Gender PIAs in cooperation with the Medical Image Computing and Computer Assisted Intervention (MICCAI) Society - brings researchers together to experience how AI can be applied to neuroimage analysis and to consider the social implications of these technologies in AD research. Participants will be introduced to AI-driven imaging pipelines based on deep learning and large language models. We will showcase foundational models trained on brain images to track brain aging and introduce a ChatGPT-like tool that enables prompt-based interaction with brain images from individuals with AD. Through demonstrations and hands-on exercises, we will introduce the NiChart cloud platform to derive AI-based imaging signatures of AD. NiChart (https://neuroimagingchart.com/) provides an end-to-end, no-code workflow for processing MRI scans to identify brain changes in aging and AD. We will next cover longitudinal modelling of neuroimaging changes, integrating NiChart output into further analyses. Beyond technical methods, the workshop will address sustainable AI applications for neuroimaging in low- and middle-income countries, including AI solutions for ultra-low-field MRI and low-dose PET in AD. In summary, by combining conceptual insight with practical training, this workshop -delivered by senior and early-career researchers - will help participants build AI-supported neuroimaging workflows and apply AI critically in studies of AD-related brain changes.

Organizing Committee

- Michael Ewers, PhD
- Marius George Linguraru, DPhil, MA, MSc
- Michael Belloy, PhD
- Abraham Varghese
- B Kannan

- Vinu Sherimon

Target Audience

This ISTAART immersive workshop is designed for researchers at beginner, intermediate, and advanced levels.

Learning Objectives

- Apply AI-based tools and pipelines for neuroimaging analysis in the field of Alzheimer's disease (AD).
- Learn about the development of large language models and deep learning for image augmentation and diagnostic solutions in medical imaging.
- Discuss the social implications of AI in brain research.

Registration

Pre-conferences are offered for in-person attendance only. Preconferences require a separate registration fee in addition to AAIC full conference registration, or they may be purchased as stand-alone events. Visit alz.org/AAIC.

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Time	Session Details	Speakers and Moderator
8:00 a.m. - 8:05 a.m.	Welcome and housekeeping notes	
8:05 a.m. - 8:50 a.m.	Lecture on LLMs in brain image analysis and demo of LLM-supported applications	
8:50 a.m. - 9:15 a.m.	AI-based analysis of ultra-low-field MRI and discussion of use in LMICs	
9:15 a.m. - 10:00 a.m.	Introduction to NiChart & demonstration/hands-on exercise using the NiChart pipeline	
10:00 a.m. - 10:15 a.m.	**Break**	
10:15 a.m. - 10:45 a.m.	Introduction to Jamovi – installation, familiarization	
10:45 a.m. - 11:50 a.m.	Hands-on Longitudinal analysis of	

	NiChart volumetric data with Jamovi	
11:50 a.m. - 12:00 p.m.	Closing remarks and feedback	