Annual Report 2021

Data Science Center in Health (DASH)

PROJECTS

2 Selected projects
Support for another 8 proposals
Provided support to various UMCG projects

COLLABORATIONS INCUBATOR

Active participation in Dutch AI Coalition
Co-applicant proposal ELSA Lab NN & AI Hub NN
Intensified collaboration with Bernoulli FSE/UoG & Hanze UA

MACHINE LEARNING LAB

Biweekly meetings
ML support in the UMCG
Preparations for online MLL community

NEEDS ASSESSMENT

Workshop Bernoulli Institute (UoG) & UMCG
Advice on the Groningen security region
Development of an IT lab

COMMUNITY BUILDING

6 (online) DASH Sparkle Events
AI Think Tank meetings
Strategic plan DASH period 22-25

FUNDING

Multiple (succesful) grant proposals
Funding AIProHealth by EIT Health
Veni Grant awarded to Esther Metting

EDUCATION

8 Online Mini Lectures
Launch AIProHealth course
Summer School 'Data Science and AI in Health'

COMMUNICATION

LinkedIn community of 1000+ people
Ample media attention
Launch new website and Twitter account

DASH Data Science Center in Health | umcg

Preface

The first program period of the Data Science Center in Health ended in 2021. However, the growth of the amount of data and the use of data science, AI and eHealth in the UMCG increased in the past program period. Developments in these areas are growing rapidly. The UMCG has decided to continue with DASH and to invest in data science, AI and eHealth as described in the new UMCG strategie: 'Koers25'. Therefore the DASH team has been expanded with three experts to take the program to the next level: Esther Metting in eHealth, Job Doornberg in the Clinical Implementation of Artificial Intelligence, and Rozemarijn Vliegenthart in Clinical Cohort Data. Peter van Ooijen was already part of the DASH team with his expertise in Machine Learning. After completing the first program period in 2021, the DASH program will be continued until 2025.

In reflection: we had a good and very busy year. In this annual report you will get an insight into the work we did in 2021. For example, the launch of the first summer school 'Data science and AI in Health' and the Massive Online Open Course 'How AI can support Healthcare' with more than 1600 subscribers.

In addition, DASH has contributed to the creation of the Northern Netherlands AI hub and the preparations for the application for the growth fund (NLAIC/NWO) for an ELSA lab Northern Netherlands have been completed (project was granted in January 2022). Partnerships have been set up with the Hanze University of Applied Sciences and the Bernoulli Institute (Faculty Science & Engineering University Groningen) in the field of Data Science and AI.

The future in data science, AI and eHealth for UMCG is promising!

Frank Schröer MSc
Program manager / Manager

We connect experts in data science, eHealth, machine learning, and Artificial Intelligence. We are DASH.

DASH experts

Esther Metting - eHealth

Esther Metting is a psychologist and epidemiologist, working as assistant professor at the Data Science Center in Health (DASH) and the University of Groningen. Since September 2021, she is a member of the Young Academy Groningen. During the COVID-19 crisis, Esther evaluated the CoronaMelder and CoronaCheck applications for VWS and she led the evaluation of the COVID-19 fast testing lane for education organisations in Groningen. Esther also worked as project leader eHealth in a large health care organisation and is active as board member or advisor in several patient organisations. Her goal is to use her talent, experience and passion for science to improve scientific knowledge in the field of eHealth.

Rozemarijn Vliegenthart - Clinical Cohort Data

Rozemarijn Vliegenthart is Professor of Cardiothoracic Imaging and Radiologist at the UMCG. Her research focuses on screening and early detection of cardiothoracic diseases, using newest techniques including AI, with the final goal of personalised prevention strategies. She has ample research experience in population cohort studies, including ImaLife (Imaging in Lifelines) and NELSON (lung cancer screening). Vliegenthart is PI of ImaLife, CONCRETE, and B3care. In B3care, a large-scale imaging biobank is created for validation of AI algorithms. Vliegenthart is currently Vice President of the European Society of Cardiovascular Radiology.

Job Doornberg - Clinical Implementation of Artificial Intelligence

Job Doornberg is Orthopaedic Trauma Surgeon at the UMCG and part of the research group ‘Innovative orthopaedics’ that investigates innovative imaging techniques, risk predictions, tools to support surgical decision making and advanced 3D techniques to develop innovative methods for diagnostics and treatment. Clinical applications of artificial intelligence have the great potential to personalise (fracture) treatment. However, the great potential of AI needs careful and conscious evaluation before implementation, by prospective “silent” testing with integration in patients’ electronical medical records facilitating rigorous scientific validation of algorithms.

Peter van Ooijen - Machine Learning

Peter Van Ooijen is Associate professor of radiation oncology and Machine Learning Lab (MLL) Coordinator at the UMCG. Peter’s main research focus is the application of machine learning and deep learning into medical imaging for detection, segmentation, diagnosis, treatment and prediction of disease. He is a Technical Computer Scientist and obtained his MSc from the Delft University of Technology and PhD at the medical faculty of the University of Groningen on advanced visualisation of the heart. Currently he is a board member of the European Society of Medical Informatics.

DASH Activities 2021

Below (and on the first page) you find a summary of the activities that DASH organised and participated in, to achieve the objective of advancing data science in health at the UMCG. An extensive list of activities can be found in the Appendix.

PROJECTS DASH

Once a year you can apply for a DASH Project Grant and thereby get dedicated support from the DASH team for getting your research project started. DASH Project Grants are open to UMCG-researchers, working in (pre)clinical UMCG departments, who perform promising research that involves challenges regarding (big or complex) data, research IT, eHealth or data science. Approved projects will be adopted as 'DASH projects' and receive dedicated data science support from the DASH team. In 2020, a project call was published to gather these promising projects from UMCG researchers, resulting in ten project proposals. Two selected projects received dedicated support in 2021; Direct Patient Feedback Application (DPF app) and Genomics Clinical Decision Support. For the other eight proposals connections were made to help them on their way, both done in good cooperation with other departments and organisations, such as IM-Research | UMCG, GDCC (Groningen Digital Competence Centre) and the CIT (Center for Information Technology, University of Groningen). Furthermore, DASH has provided support for various projects of the UMCG. At the end of 2021, a new project call was prepared and published to select two new DASH projects for 2022.

COLLABORATIONS INCUBATOR DASH

DASH is a collaborations incubator and helps with getting pilot projects started with public and/or private partners. In 2021, DASH was an active participator in the Dutch AI Coalition and Northern HUB and closely involved in the preparation of the ELSA AI lab Noord-Nederland (ELSA-NN) application, led by dr. M. Plantinga, which was submitted at the end of 2021 and awarded in January 2022. DASH also worked on a more intensive and structured collaboration with, for example, Bernoulli FSE/UG, ESHPM/EUR, other Dutch UMCs, dHealth and various companies in the Northern Netherlands. Within the AIProHealth project there was close collaboration with the University of Tartu, Copenhagen, Cologne and various companies, and many great collaborations have also been set up for the new Summer School 'Data Science and AI in Health'.

MACHINE LEARNING LAB

The Machine Learning Lab (MLL) supports scientists within the UMCG on machine learning matters as well as community building within the UMCG. (Bi) weekly MLL (mostly online) meetings were organised, where PhDs, postdocs and staff discuss machine learning topics on a technical level. The MLL is involved in various research projects within and outside the UMCG and has its own dedicated PhD projects. Multiple counseling meetings have been held with different clinicians to help them advance projects in Machine Learning. The group continues to grow steadily; at the end of 2021 the MLL had over 50 members. In order to sufficiently support and bring this group together during the pandemic, preparations were made in 2021 for an online community, which was launched in January, 2022.

NEEDS ASSESSMENT DASH

Registers needs, challenges, bottlenecks and other input related to data science, to enable the right solutions and thereby improve the level of research projects in the field of data science, AI, eHealth and machine learning. An example of an activity in 2021 is, for example, the participation of DASH members in brainstorm sessions about the physical design of brand new schools of the University of Groningen and Aletta Jacobs School of Public Health, such as the Jantina Tammes school (AI/digitisation). Besides these sessions, DASH organised the workshop Bernoulli (UoG) and UMCG, about cooperation in the field of Research and Education and DASH worked on the application and start of the establishment of an IT lab. Furthermore, Esther Metting advised the Groningen Security Region on behalf of DASH with regard to social unrest.

COMMUNITY BUILDING DASH

DASH connects the data science, AI, machine learning and eHealth community by, for example, organising Machine Learning Lab and AI Think Thank meetings and monthly DASH Webinars. In 2021, DASH organised six DASH Webinars, with many interesting speakers who shared their knowledge and experiences in the field of data science in healthcare. All webinars are recorded and can be viewed on our Youtube channel. Furthermore, DASH members took part in panel discussions, relevant events, workshops and gave presentations inside and outside the UMCG.

GRANTED AND SUBMITTED FUNDING DASH

DASH provides advice on funding opportunities and aims to help acquire grants for data science, eHealth and machine learning projects. In 2021, DASH itself was also involved in many (successful) project proposals. For example, DASH participated in consortia such as ROBUST, NELSON-POP, AI hub Northern Netherlands, all of which have been honored with grants. Moreover, the educational AIProHealth project received funding from EIT Health, and on top of that the quality label 'Recognition for Innovative Ideas Worthy of Investment'. Esther Metting worked on a Humboldt Grant proposal in 2021, together with the intensive care unit of the UMCG and Charité Berlin. She also submitted a Veni Grant proposal, which was later revealed to have been awarded by NWO. DASH also contributed to the ELSA lab NN application for NWO, which was awarded in January 2022.

EDUCATION DASH

DASH supports educational activities, such as the minor 'Data Wise', courses on AI and the educational curriculum 'data science' of Biomedical Sciences at the University of Groningen. We work together with various initiatives, such as AiMED, to support AI matters and exchange information. In addition, DASH organises the Summer School 'Data Science and AI in Health' and leads the educational project AIProHealth. In 2021, AIProHealth's MOOC called 'How AI can support Healthcare' was launched on the FutureLearn. To share knowledge, DASH posts online mini-lectures, in which experts tell you more about specific relevant topics, cases or developments in the field of data science, AI, eHealth and machine learning. Furthermore, DASH has given many PhD students a platform to tell more about their research and its results in videos, which we shared with our community. Moreover, DASH experts gave guest lectures at relevant courses, events and courses.

COMMUNICATION DASH

DASH contributed to various outreach activities in 2021, for example by publications in Memorad and the evaluation reports of CoronaCheck. In 2021, DASH appeared several times in the media. Under which in press releases about AIProHealth and the UMCG investments in data science, AI and eHealth. Esther Metting was also regularly featured in the media as an expert on corona-related topics. Other important milestones: an impact story from UMCG Research about DASH has been published, a DASH Twitter account has been launched, the DASH website has been expanded and the DASH community on LinkedIn has been expanded to 1000+ followers. The DASH Youtube account had about 200 followers at the end of 2021, and some videos reached more than 500 views.

AI Think Tank

The AI think tank was established in 2020 to provide solicited and unsolicited ideas and advice on the policy and application of AI in research and clinical practice. The members of the think tank represent a cross-section of professionals involved in AI within the UMCG.

- Job Doornberg (chairman) - Orthopaedic Trauma Surgeon
- Christian van der Hilst - Head of Strategic Analytics
- Lilian Peters - Epidemiologist / Assistant Professor
- Inge Holtman - PhD researcher / Assistant Professor
- Rick Pleijhuis - Internal Medicine Resident
- Rudolf Fehrmann - Medical Oncologist / Principal investigator
- Gerton Lunter – Statistics and Machine Learning
- AiMED (student organisation)

The DASH team

The different team members work part-time for DASH, as they are also involved at the UMCG in various other roles. With the limited amount of time available, many things were accomplished throughout 2021.

- Frank Schröer – Program manager / Manager
- Michiel Hooiveld – Liaison and Policy Officer
- Jan Jurjen Uitterdijk – Project Portfolio Manager
- Johanneke Wijbenga – Secretary
- Femke van der Bij – Communication Officer
- Eline Meijer - Data Scientist
- Rosa Verhoeven - Content Developer AIProHealth
- Bart Scheerder - Business Developer AI

- Natasha Maurits – Advisor

DASH experts

- Peter van Ooijen – Machine Learning | Machine Learning Lab Coordinator
- Esther Metting - eHealth
- Rozemarijn Vliegenthart - Clinical Cohort Data
- Job Doornberg - Clinical Implementation of AI

Get in contact




Appendix - List of DASH activities 2021

PROJECTS DASH

- Two DASH projects were selected and received dedicated support:
  Project 1: Direct Patient Feedback Application (DPF app)
  Project 2: Genomics Clinical Decision Support
- Another seven submissions were helped/connected
- Preparation new project call
- Provided support to various UMCG-projects

COLLABORATIONS INCUBATOR DASH

- 10 February: Invited lecture on 'European COVID19 projects in diagnostic imaging' by Peter van Ooijen during the webinar 'European COVID19 projects in diagnostic imaging. INFN and the Covid-19 challenge' by Instituto Nazionale di Fisica Nucleare
- 3 March: Participation in the interactive HTRIC stakeholder's workshop (Peter van Ooijen)
- 4 March: Attendance Health-RI Conference + 2 poster presentations of B3CARE/XNAT – Peter van Ooijen with student Nils van der Velden
- 13 April: Presentation by Peter van Ooijen during the webinar 'Automated machine learning using routinely registe red data from general practice' by HAG/UMCG
- 22 April: Presentation by Peter van Ooijen during LISA symposium 'AI & Law – When Artificial becomes Human'
- 8 May: Presentation at the IASLC CT Screening Symposium: 'Artificial Intelligence Challenges for LDCT Lung Cancer Screening' by Peter van Ooijen
- 9 June: Presentation at the KNMG (District Groningen Drenthe) Seminar: 'Artificial Intelligence: A nice tool or will the doctor soon be superfluous?' by Peter van Ooijen
- 16 June: Presentation at the conference 'Artificial Intelligence' of the ESMPE (European School for Medical Physics Experts) on 'AI – Solving the challenges in data access, curation, ethical and legal issues' by Peter van Ooijen
- 17 June: Presentation at the conference 'Architecture in Healthcare' by Peter van Ooijen
- 26 June: Presentation at Masterclass AI – NVvR: Challenges of AI in Medical Applications by Peter van Ooijen
- 24 July: Presentation at online conference 'The Wizardry of artificial intelligence 2.0 – AI and machine learning in cancer imaging' by Rozemarijn Vliegenthart
- August: Milestone for the large-scale population imaging study, Imaging in Lifelines (ImaLife): 10,000th ImaLife participant scanned (Rozemarijn Vliegenthart)
- 1 Oktober: Attendance HTRIC Research Meetup (Eline Meijer, Rosa Verhoeven, Frank Schröer, Natasha Maurits and Bart Scheerder)
- 20 Oktober: Collaboration with the Charité Institute in Berlin for research grant by Esther Metting
- 2-4 November: Attendance Zorg & ICT, Jaarbeurs Utrecht (Esther Metting and Peter van Ooijen)
- 4 November: Presentation about 'The Challenges of AI in Medical Applications' at HOVO course 'Artificial Intelligece - A Curse or a Blessing?' by Peter van Ooijen
- 9 November: Workshop Bernoulli (UG) and UMCG, organised by DASH, about cooperation in the field of Research and Education (28 participants)
- Invited Guest Lecturer 'Clinical Applications of AI in Orthopaedic- and Trauma Surgery' – Dutch Trauma Association (OTA), Amsterdam (Job Doornberg)
- 18 November: Keynote by Peter van Ooijen at the 50th anniversary Annual Meeting of the British society of Neurora diology 'Principles, present and future of AI in radiology/neuroradiology' - onsite at the Royal College of Physicians in London
- 9 December: Presentation during webinar Democracy & Governance (D&G) about 'Citizen science and Coronamelder' by Esther Metting
- 16 December: Attendance at event by the Digital Literacy Coalition & Samenwerking Noord 'All Digital? The digital literacy of the North' (Natasha Maurits and Esther Metting)
- Active participation of DASH in the Dutch AI Coalition and Northern HUB
- Cooperation Isala clinics Zwolle

- Within AIProHealth collaboration with Tartu, Copenhagen, Cologne and various companies
- Collaboration with ENLIGHT within Summer School, educational grant for students at universities of the ENLIGHT network
- Exploration for collaboration between businesses in the field of AI in the Northern Netherlands, among others wit TeraRecon, NVidia, Ziuz
- NLP text mining for Dutch Medical Text, collaboration with UMCU UMC Amsterdam and others. - grant awarded from the SURF-DCC Support Call (Natasha Maurits, Frank Schröer)
- Evaluation CoronaCheck (Esther Metting)
- Telemonitoring after ablation: NFU CItrien 2 project (Esther Metting)
- VWS project 'Responsible use of apps for infection control' (Esther Metting)
- Project 'NLP in the consulting room' by Job Doornberg (Frank Schröer/Jan Jurjen Uitterdijk)
- Collaboration with dHealth (Frank Schröer/Peter van Ooijen/Bart Scheerder)
- MDL Wouter Nagengast Data Science support project 'Synthetic Data Generation of Colonoscopy' (Frank Schröer/ Peter van Ooijen/Bart Scheerder)
- Collaboration with Wim Drouven on Machine Learning model to predict primary failure based on a shunt database (Frank Schröer, Job Doornberg)
- Project 'Medication Verification by patient' (Esther Metting)
- Project 'Safe@Home' (telemonitoring pregnant women) (Esther Metting)
- Collaboration PhD with Campus Fryslan: 'Developing an app for detecting neurological disorders in low-income countries' (Esther Metting)
- Collaboration with Syntho - Synthetic data
- Rozemarijn Vliegenthart becomes ambassador Leading Coalition Datapoort (Koers25), and Natasha Maurits and Jan Jurjen Uitterdijk become active participants in project group
- Participation and involvement in UMCG Cohort catalog set-up/completion (Rozemarijn Vliegenthart)
- Reviewer of original research manuscripts for 'Radiology: Artificial Intelligence' (Rozemarijn Vliegenthart)
- Collaboration with ESHPM/EUR. Knowledge exchange and first steps for using each other's educational materials (Frank Schröer/Peter van Ooijen)
- Initiated collaboration with the Hanze University of Applied Sciences research group 'Data Science for Life Sciences and Health' in the field of internships and knowledge exchange (Frank Schröer/Natasha Maurits)
- Partly set up the network data science & AI organisations within UMCs (Frank Schröer /Michiel Hooiveld)
- More intensive and structured collaboration with Bernoulli FSE/UG
- Membership Z-Inspection, consortium on Mindful Use of AI (Peter van Ooijen)
- Member of the European Alliance for Medical Radiation Protection Research (EURAMED) Working Group on "Ad vancing precision, effectiveness and safety in oncologic care by imaging and artificial intelligence." (Peter van Ooijen).
- European Society of Medical Imaging Informatics (EuSoMII), board member (chair of the research committee) (Peter van Ooijen)
- European Society of Radiology (EuSoMII representative in the Education Committee) (Peter van Ooijen)
- Parelduiken (Eline Meijer and Peter van Ooijen together with Frans Cornelissen)

MACHINE LEARNING LAB

- Bi-weekly (online) meetings all members of the Machine Learning Lab
- Continued to use the Machine Learning Canvas as intake for new projects. Helped several UMCG-projects by filling in Machine Learning Canvases
- Synthetic Data generation of colonoscopy images project continued as collaboration of dHealth, Ziuz and MDL UMCG (prof. dr. W. Nagengast). Synthetic data also one of the use-cases in the ELSA lab.
- PhD on project on Distributed Deep Learning in collaboration with Maastro Clinic and other partners (AMICUS project).
- Advisory meetings with a variety of clinicians to help them advance projects in Machine Learning
- Preparations to start an online MLL community

NEEDS ASSESSMENT DASH

- 26 Oktober: Participation in brainstorm about the physical design of brand new schools of the University of Groningen and Aletta Jacobs School of Public Health , such as the Jantina Tammes school (AI/digitisation) (Frank Schröer and Natasha Maurits)
- Advice on the Groningen security region with regard to social unrest (Esther Metting)
- 9 November: Workshop Bernoulli (UG) and UMCG, organised by DASH, about cooperation in the field of Research and Education
- Application and start of the establishment of an IT lab

COMMUNITY BUILDING DASH

- Six DASH Webinars (all webinars are recorded and can be viewed on our Youtube channel):
  1. Population Health Data NL by Jochen Mierau and Maarten den Braber
  2. How to get more out of your data | Collaboration UMCG, Hanze University of Applied Sciences, IT Academy and ERIBA
  3. Trustworthiness of AI applications in Healthcare by Christian Garbin and Oge Marques, Florida Atlantic University
  4. The Data Revolution in the Intensive Care Unit by Lucas Fleuren, Amsterdam UMC
  5. Artificial intelligence in the diagnosis of Covid-19 by Laure Wynants, KU Leuven/Maastricht University
  6. From record to risk estimate: using Clinical Care Data for Health Research by Sophie Bots, UMC Utrecht
- Drawing up a strategic plan for the new DASH period 22-25 (Frank Schröer, Natasha Maurits)
- 24-27 June: Presentation about DASH and part of the jury at the AIHACKCOVID by AiMED - Eline Meijer
- 29 June: DAME Symposium: 'The possibilities of AI in Medical Imaging'
- 5 – 10 July: First edition of the Summer School 'Data Science and AI in Health'
- 6 September: Presentation about Data Science and AI in the UMCG at the North West Hospital Group (Alkmaar) by Frank Schröer
- 8 November: Participation in Workshop by the Jantina Tammes School (Frank Schröer and Natasha Maurits)
- 15 November: Participation in panel discussion during the launch event of the Groningen Digital Competence Center by Rozemarijn Vliegenthart
- 29 November: Presentation about DASH at the UMCG staff convention by Frank Schröer
- Online and offline meetings with the UMCG AI think tank

GRANTED AND SUBMITTED FUNDING DASH

- AIPRoHealth funded by EIT Health (Peter van Ooijen)
- Participation of DASH in Consortium ROBUST, which received NWO funding for research into reliable AI
- NELSON-POP (personalised outcome prediction) project granted 1,4 million euros by KWF Cancer Control for research into better selection of individuals and lung nodules in lung cancer screening (Rozemarijn Vliegenthart)
- Participation of DASH in ELSA AI lab Northern Netherlands proposal NWO
- Participation of DASH in the 'AI hub Northern Netherlands' proposal - granted with 2,5 million euros (Michiel Hooiveld, Frank Schröer, Bart Scheerder)
- AIProHealth receives Quality Label 'Recognition for Innovative Ideas Worthy of Investment' by EIT Health
- Esther Metting Awarded a Veni grant by the Dutch Research Council (NWO)
- Submission of Humboldt Grant proposal together with intensive care unit UMCG and Charité, Berlin: 'Reducing post intensive care syndrome with eHealth: the development of three roadmaps for implementation in healthcare' (Esther Metting)
- Received subsidy from Interreg: 'What shall we do with the flu: Interreg Grant received to prevent antibiotic resistan ce in cross-border region' (Esther Metting)
- Collaboration on an EU grant proposal together with Spain, Portugal and Estonia on 'Development of automatic risk estimates and advice heart failure and COPD patients for doctors and patients' (Esther Metting)
- Grant proposal 'Rights and Access to Mental health support for all Children and Adolescents' (Esther Metting)
- Grant proposal 'Experimental Garden (proeftuin) Digital Health' (Natasha Maurits, Esther Metting)

EDUCATION DASH

- Eight Mini Lectures published on our DASH Youtube Channel:
  1. B3CARE XNAT-Based Research Infrastructure for Imaging Biomarker Evaluation by Peter van Ooijen
  2. Automated Pipeline for XNAT Data Bulk Export by Nils van der Velden
  3. Data Science in Radiology by Allard Olthof (Connected with PhD Thesis defense)
  4. Deep Learning for Lung Cancer by Sunyi Zheng (Connected with PhD Thesis defense)
  5. A data driven drive through the pandemic by Jochen Mierau| AIHACKCOVID AiMED
  6. Automatic segmentation of the Mandible for 3D Virtual Surgical planning by Bingjiang Qiu (Connected with PhD Thesis defense)
  7. Tumor Segmentation on Head and Neck PET/CT Images using Deep Learning by Alessia de Biase (Connected with HECKTOR Challenge participation)
  8. The prediction of Progression Free Survival (PFS) from PET/CT Images and clinical data by Baoqiang Ma (Connec ted with HECKTOR Challenge participation)
- Participation UoG minor Data Wise, lectures given by Peter van Ooijen
- Guiding students (by Eline Meijer, Rosa Verhoeven, Frank Schröer and Peter van Ooijen)
- Guest lecture at the Marketing Faculty Economics and business of the University of Groningen on 'Citizen Science and CoronaMelder' by Esther Metting
- Capita Selecta "Development and Implementation of AI in Radiology" at the dept of Radiology, UMCG by Peter van Ooijen
- 5 – 10 July: Organising and hosting the first edition of the Summer School 'Data Science and AI in Health'
- Lecture on e-Health at the Management and Economics in Healthcare and Welfare course by Esther Metting
- Lecture 'Health Behaviour Change' at the research master epidemiologie by Esther Metting
- Course 'Strategic Leadership for Medical Specialists: Innovation management and eHealth' at the UoG by Esther Metting
- 4 November: Presentation at HOVO (Higher Education for the Elderly) on 'Challenges of AI in Medical Applications; How does AI relate to Human Intelligence and can AI transcend Human Intelligence?' by Peter van Ooijen
- 25 November: Presentation at HOVO (Higher Education for the Elderly) on 'AI in diagnosis and treatment; early \ diagnosis and personalized treatment – increasing the chances of recovery?' by Rozemarijn Vliegenthart
- 29 November: Launch online AIProHealth course 'How Artificial Intelligence Can Support Healthcare' on Future Learn. DASH lead development by Peter van Ooijen, Rosa Verhoeven, Bart Scheerder and Michiel Hooiveld. Collaboration with Tom Spits of the University of Groningen and international partners.
- Oktober – December: Setting up teaching materials for - and developing the serious game of AIProHealth
- Course coordination of Learning Path (leerlijn) Data Science FSE 'Big Data and Applications in Biomedicine' by Peter van Ooijen
- Preparing and giving lectures at Learning Path Data Science FSE – by Peter van Ooijen, Rozemarijn Vliegenthart, Esther Metting and Job Doornberg

COMMUNICATION DASH

- LinkedIn community expanded to 1000+ people
- Launched a DASH Twitter account
- DASH page on UMCG Research website further expanded
- Preparations for new format newsletter from 2022
- Two press releases issued; see public outreach for media links

DASH in the news

DASH IMPACT STORY

- DASH: knowledge hub, community and facilitator in health data science

COVID-19 RELATED

- What is the effect of a corona pass?
- Goodbye one and a half meters: 'Now search for new social norms'
- 'Introducing CoronaCheck can convince vaccination doubters'
- Willingness to test for corona complaints is decreasing: 'But it is just so important'
- Schools get self-tests, but 'only works if most parents cooperate'
- 'I expected that the OMT would advise to wait a little longer'
- Groningen experts crack down on the corona approach: 'That's not how you fight a pandemic'
- Why will you soon be allowed to sit side by side and pant in a gym without a QR code, but not in a disco?

AIPROHEALTH

- UMCG in Groningen: fear of healthcare professionals hinders the use of Artificial Intelligence in healthcare. The hospital wants to take away that fear with an education project - Dagblad van het Noorden (dvhn.nl)
- AI education project UMCG receives EIT subsidy - ICT&health (icthealth.nl)
- UMCG subsidy for educational project Practical AI for healthcare professionals | MedicalFacts.nl
- UMCG subsidy for educational project 'Practical AI for healthcare professionals'
- Grant for educational UMCG project 'Practical AI for healthcare professionals' (umcgresearch.org)
- UMCG will use 'artificial intelligence' (a.i.) more in healthcare - Groninger Internet Courant. (gic.nl)
- Acceptance of AI in healthcare lags behind - Training and serious game should make the difference

INVESTMENT AI, DATA SCIENCE & EHEALTH UMCG

- UMCG invests almost two million euros in AI, eHealth and big data
- UMCG invests 2 million euros in AI, e-health and big data - ICT&health (icthealth.nl)
- UMCG invests almost two million euros in AI, eHealth and big data - Groningen (nieuws.nl)
- UMCG invests almost two million euros in AI,… | Economy Groningen
- UMCG invests 2 million euros in AI, e-health and big data - Skipr
- UMC Groningen invests heavily in AI, eHealth and big data - Dagblad van het Noorden (dvhn.nl)

PUBLICATIONS BY DASH EXPERTS

- Research report process evaluation CoronaCheck (Esther Metting)
- Evaluation CoronaCheck - The digital support of the corona ticket (Esther Metting)
- Effectiveness of Telemonitoring for Respiratory and Systemic Symptoms of Asthma and COPD: A Narrative Review (Esther Metting)
- Creating a training set for artificial intelligence from initial segmentations of airways (Rozemarijn Vliegenthart)
- Human-recognizable CT image features of subsolid lung nodules associated with diagnosis and classification by con volutional neural networks (Rozemarijn Vliegenthart)