THE CHALLENGE

End of Life Prognosis

Due to difficulties in identifying which patients are in the last 6-12 months of their life, many of these patients do not receive well-coordinated, high quality palliative care.

THE SOLUTION

The team developed a predictive machine learning model to predict binary labels for patients that will survive less than 12 months.
This approach can be scaled to clinician tools across medical institutions which will improve the recommendation of palliative care to patients earlier and more accurately.

THE BENEFITS

- Early palliative care empowers patients to make decisions and have discussions about what is important to them in their final months
- Improves patient symptom management and quality of life
- lessens the emotional & psychological toll on the patient, carers and families

WA Health Hackathon 2021

MEET OUR WINNING TEAM

JAKE KENDRICK

Jake's Background

I am currently a first year PhD student in the field of Medical Physics. I have a keen interest in the utilisation of AI techniques to solve clinical challenges and improve patient care.

My PhD research focus will be centred on the development of an automated segmentation framework for metastatic prostate lesions, and the subsequent extraction of radiomics features to inform a precision medicine approach to metastatic prostate cancer treatment.

Future Plans

Following the completion of my PhD, I plan on utilising my skills in predictive modelling and AI design to work in the healthcare industry maximising patient outcomes. I am seeking post-doctoral or clinical positions where I can work towards my primary aim of improving patient lives.

CONNECT

BRANI RUSANOV

Brani's Background

I have a BSc (Chemical Engineering), GDip (Physics), and MSc (Medical Physics). Currently I am completing my PhD in Medical Physics with a major focus on AI, developing a deep learning pipeline for adaptive radiotherapy. The project aims to utilize state of the art convolutional neural networks to create synthetic CT images, automatically contour structures, and predict optimal treatment plans to improve patient outcomes by increasing the precision of radiotherapy treatments.

Future Plans

With a passion for building AI technologies for computer vision and predictive modelling, I plan to utilise the knowledge I've gained in the health sector or in a post-doctoral research position. I would also enjoy the prospect of utilizing AI in industry, specifically renewable energy.

CONNECT

NATHANIAL BARRY

Nathanial's Background

I have a BSc in Physics and Mathematics and Statistics and looked towards the practical application of radiation physics in medicine, having recently completed my MSc in medical physics. My research has been primarily focused on machine learning applications of radiomic features in neuro-oncology. I believe there is a practical solution to the incorporation of complex predictive models into the clinical workflow, to assist decision-making and improve patient outcomes.

Future Plans

I'm planning on beginning my PhD towards the end of 2021, continuing the methodology I developed in my Masters. After my PhD I'm hoping to utilize my knowledge of AI within the field of healthcare; pursuing career pathways within the clinic, research fellowships, or industry.

CONNECT