Innocens: AI based Clinical decision support technology for Neonatal Intensive Care

Abstract: One in five very low birth weight infants (<1500g) will acquire a sepsis during their admission in the NICU. If sepsis remains undetected, antibiotic treatment is delayed and outcome can be detrimental. Detection of sepsis is often difficult due to the non-specific clinical signs and the “noise” that typically surrounds decision making in an Intensive Care unit. During the Innocens project, we developed an AI Based Clinical Decision Support technology that augments intelligence of bedside healthcare workers. Our trained ML model can detect up to 75% of severe sepsis cases with a high precision and an average time gain of 7.5 hours compared to standard treatment. The focus of our technological development has been on how to operationalize AI and improve human/medical machine interaction. We strongly believe that this is the key to accelerate medical decision making and ultimately change the life course of preterm infants.

About the Speaker: I have a Pediatrics degree from Leuven, Belgium. During my two year training in Neonatal Intensive Care in Sydney (Australia) I got intrigued by neonatal hemodynamic physiology. The most important lesson I took home was to tailor the right treatment in these vulnerable infant to avoid unintentional harm. When confronted with high frequency medical datastreams in the NICU of Antwerp (Belgium), I investigated the potential of signal extraction and analysis to enhance disease recognition. By combining multiple domain experts in the Innocens project, I started my amazing journey to understand, develop and appreciate the power of precision medicine based on Artificial Intelligence and Machine Learning.

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Carmen Zoom