

# Dubyak Center for Digital Science and Innovation Presents: Computer Vision In Healthcare: An AI-Journey from 3D Microscopy Vision to Clinical Prediction

**USM Data Science Ensemble**

**Thursday, February 3, 2022 | 4-5pm EDT**

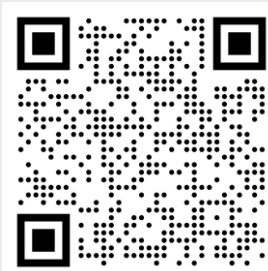
**Taking Place Virtually**



**Ahmad P. Tafti, PhD**

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**Abstract** Computer vision algorithms have made a big leap in modern healthcare, where they are incredibly performing a challenging task of training computers to replicate human vision to identify, localize, and quantify patterns in a variety of medical images, ranging from X-rays and Ultrasound images to CTs and MRIs. Particularly, deep convolutional neural networks are rapidly achieving state-of-the-art results on challenging problems, such as medical image segmentation, localization, and classification. Utilizing such advanced computational strategies, features in medical images can be automatically learned and extracted, where the learned features can be also adapted into different domains and the models are able to be used on a range of similar tasks. However, it is still a daunting task to use deep learning computational vision methods in teaching computers to see and understand what they see! In this talk, Dr. Tafti will discuss the computer vision mechanisms from 3D microscopy vision to clinical prediction. We, together, will explore what 2D-3D computational vision components are, what they do, and how.

**Short Bio** Dr. Tafti received his PhD in computer science with an emphasis on artificial intelligence and 3D computer vision. He is passionate about AI and machine learning and its applications in Healthcare. Dr. Tafti is a SiIM Imaging Informatics Innovator awardee, Mayo Clinic Transform the Practice awardee, an NVIDIA GPU awardee, and GE Healthcare Honorable Mention awardee. To date, he has authored 45+ peer-reviewed publications. Dr. Tafti has organized numerous workshops on intelligent health systems and has served on the program committee of 15+ conferences, symposiums, and journals in AI and Digital Health Sciences.

[The **USM Data Science Ensemble** is a publicly and freely available seminar series]