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## Via Machinae

*Thursday 8 July 2021 21:00 (20 minutes)*

I describe a new machine learning algorithm, Via Machinae, to identify cold stellar streams in data from the Gaia telescope. Via Machinae is based on ANODE, a general method that uses conditional density estimation and sideband interpolation to detect local overdensities in the data in a model agnostic way. By applying ANODE to the positions, proper motions, and photometry of stars observed by Gaia, Via Machinae obtains a collection of those stars deemed most likely to belong to a stellar stream. In this talk, I will provide an overview of the Via Machinae algorithm, using the known stream GD-1 as a worked example, and show preliminary results of our analysis across the full sky.

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