

# DATASCI 207

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# Bio

- Currently at Megagon Labs (R&D lab focusing on fundamental ML research)
- Previously at ML Science Manager at Amazon Alexa
- PhD from University of Chicago (focusing on optimization)
- Background in Molecular Biology

# You?

- (Under) graduate major
- Current job/occupation (if any)
- Why a Masters in Data Science?

# ML Concepts

- Can you make predictions about the future using ML? Provide an example.
- What are the 3 types of ML supervisions? Explain them.
- True or False? *Clustering is a technique used for structuring information and deriving meaningful relationships from data.*
- What is Principal Component Analysis (PCA)?
- Why do we need a train-test split?

# Snow Cover Prediction



*Sources/Usage: Public Domain.*

# ML Supervision

Image: Python Machine Learning (RM)

Supervised Learning	<ul style="list-style-type: none"><li>&gt; Labeled data</li><li>&gt; Direct feedback</li><li>&gt; Predict outcome/future</li></ul>
Unsupervised Learning	<ul style="list-style-type: none"><li>&gt; No labels</li><li>&gt; No feedback</li><li>&gt; Find hidden structure in data</li></ul>
Reinforcement Learning	<ul style="list-style-type: none"><li>&gt; Decision process</li><li>&gt; Reward system</li><li>&gt; Learn series of actions</li></ul>