UCF Center for Research in Computer Vision

CRCV RET Project

Calculus, Neural Networks, and Artificial Intelligence

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Goals and Topics:

How partial derivatives and chain rule are used in neural networks and how neural networks are designed and used in Computer Vision and AI

Functions with Multiple Variables
Partial Derivatives

Neural Networks
Backpropagation
Gradient Descent

Computer Vision and Artificial Intelligence

Computer Vision Integration:

Artificial Intelligence	Computer Vision	CRCV
Amazon Go Store Goggle Duplex AlphaGo Video Games Music, Art and Poetry	Object Detection and Recognition Self Driving Cars Cancer Detection	Crowd Counting (Kishan Athrey)

Timeline:

Summer 2018: **UCF RET**	
August – December 2018: Planning	
January 2019: Implementation (90-minute sessions)	Lesson 1: Partial Derivative Lesson 2: Neural Networks Lesson 3: CRCV and Crowd Counting Lesson 4: Computer Vision and AI
February 2019: Reflection	