CFCS 杰出讲座系列 Distinguished Lecture Series

Adversarial Examiners and Generative Models

Prof. Alan Yuille

Johns Hopkins University

Host: 王亦洲 教授

2020年11月24日 星期二 9:00–10:00am

静园五院204会议室（在线报告，现场可提问）

Abstract

There has been enormous progress in computer vision using regression-based techniques like deep networks evaluated on finite-sized balanced annotated datasets. But in this talk I will argue that there are limitations to this approach. The key problem is that the space of images is infinitely large and visual scenes are combinatorially complicated. This means that evaluating algorithms on finite-sized datasets is problematic and alternative challenges and performance measures, such as adversarial examiners, are required in order to probe for the strengths and weaknesses of vision algorithms. I will argue that generative approaches are more promising than regression-based methods to address these challenges.

Biography

Alan Yuille received his B.A. in mathematics from the University of Cambridge in 1976, and completed his Ph.D. in theoretical physics at Cambridge in 1980, supervised by Stephen Hawking, followed by postdoctoral work in 1981 at the Physics Department, University of Texas at Austin, and the Institute for Theoretical Physics, Santa Barbara. He became a research scientist at the Artificial Intelligence Laboratory at MIT (1982-1986), followed by postdoctoral research and then a faculty position in the Division of Applied Sciences at Harvard (1986-1995). From 1995-2002 he worked as a senior scientist at the Smith-Kettlewell Eye Research Institute in San Francisco. From 2002-2016 he was a full professor in the Department of Statistics at UCLA with joint appointments in Psychology, Computer Science, and Psychiatry. In 2016 he became a Bloomberg Distinguished Professor in Cognitive Science and Computer Science at Johns Hopkins University. He has won a Marr prize, a Helmholtz prize, and is a Fellow of IEEE. He has broad research interests in vision, machine learning, cognitive science, and neuroscience. He has over 400 peer reviewed publications, over 58,000 citations, and an h-number of 106.

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