

1998 Paper 12 Question 11

Computer Vision

Give three examples of problems in computer vision which are formally ill-posed. In each case explain how one or more of Hadamard's criteria for well-posed problems has failed to be satisfied. Illustrate how the addition of ancillary constraints or assumptions, even metaphysical assumptions about how the world behaves, enables one to convert the ill-posed problem into a well-posed problem. Finally, discuss how the use of Bayesian priors can perform this function. [20 marks]