My resume and transcript introduce my background in mathematical puzzles and computer science. I have recently been studying analysis and partial differential equations qualifying examinations from Stanford. A previous PhD admissions interviewer said I ought to ensure familiarity with graduate level analysis to pass upon entering their programme.

Towards the end of my Master Of Computer Science degree at the University Of Illinois Urbana-Champaign I started reading the ArXiV and Statistics Stack Exchange more seriously. I searched around on topics like separating hyperplane selection in cases of asymmetric training data, results on different kernel density estimators, and computing certain posterior distributions faster than standard Markov Chain Monte Carlo techniques. This has been exciting. People discuss modified and quasi Markov Chain Monte Carlo for many different settings, which seems to be a very popular and recurring topic on the ArXiV and in theses.

Then I wrote and posted my research paper Y on the ArXiV Statistics Theory section along with codes.

Your school's faculty, research, and resources would contribute to my future goals. More education in mathematical finance will be useful. As will having a strong adviser guide me in my readings and research. The community also ought to provide stimulating conversation. I would love to pursue a career in academia and research. I will only attend if I receive fully funded tuition, health insurance, and an assistantship stipend.