**Chris Denniston** 

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John Hopkins University, Department of Computer Science 3400 N Charles St Baltimore, MD 21218

Dear Sir or Madam,

I was very excited to learn that John Hopkins University is offering undergraduate research positions, especially in positions involving machine learning. I am extremely interested in the idea of machine learning and would love a position where I could further my knowledge and help with useful research.

My top three choices of project all involve machine learning in some capacity because that's the field I would like to pursue for my graduate studies. My first choice would be "Machine Learning Methods for Measuring (Disease) Activity Using Smart Phones: Application to Parkinson's" because I am very interested in the application of Machine Learning and Data Science to the health care field, as I believe big data and machine learning will push the fold in medical care and provide better care for our aging population. Due to similar interests my second choice is "Early Detection of Adverse Events". The idea of predicting future events based on large amounts of data is what initially attracted me to pursue machine learning, and it is something I would enjoy researching to a great extent. My third choice would be "Computer Vision for Surgical Data Science". I believe this would further my computer vision skills and allow me to work with a large, important data set, which would allow me to learn how to handle and process data sets.

I believe I would make a useful candidate for the research position because I have taken a class in Machine Learning at the University of Missouri - Kansas City. Additionally, I have had the opportunity to complete some outside projects for my company using some of the statistical modeling methods I learned in that the machine learning class. I also have been the Software Lead of the University of Missouri - Kansas City Robotics Club, which has strengthened my C++ skills and software design skills. These skills have been further strengthened by working as a Backend Intern at Payit, Inc., for which I write mostly Java code but have a lot of say in the architecture of the programs. While on the Robotics Team I also have had a chance to use some OpenCV computer vision to solve some problems the robot has faced, which I believe would also be helpful to the research.

I am very excited to hear from you because I think this position would fit well into my future plans of pursuing research in the field of Machine Learning, and I think the projects seem highly useful to my career in the future, as well as the medical world in general.

Thank you for your consideration,

## **Chris Denniston**