

Dear [REDACTED]

My name is [REDACTED] I'm Brazilian and a Computer Science Master of Science student at Universidade Federal de Minas Gerais (UFMG) in Brazil. As a whole, UFMG is considered the third best university in Brazil while its CS program is considered the best one. I am searching for a PhD degree program and I am interested in the work carried at [REDACTED] and the Department of Computer Science and Operations Research at [REDACTED]

In 2007 and 2010, when I was 14 and 17 years old, I received the Bronze Medal in the Brazilian Mathematics Olympiad, an award that included a college scholarship in in any field of my choice with the requirement to take advanced mathematics classes. I decided to follow a career in statistics and entered UFMG. During my undergraduate years, I received a prize (Bolsa de Acesso ao Livro Bernardo Álvares) for having the largest GPA in my field. I also worked for one year in the UFMG Statistics Junior Enterprise, a company managed by UFMG students to provide statistical consulting services. At the end of 2013, I started a part-time internship job as a statistician carrying out data analysis for the academic evaluation in UFMG, a position I still hold.

I was accepted in the UFMG CS graduate program in March 2015. My M.Sc. work is in machine learning (ML) and probabilistic models (PM). Currently, I work with graphical models and Bayesian Statistics in my M.Sc. Thesis analysing basketball, volleyball, soccer, and handball data. I collected data from all games in 1531 seasons run in 84 different countries. The aim is to evaluate the mix of ability and luck in each sport and country in order to identify which one is more competitive. We were able to provide evidence to a rumour of sports fans that in sports such as soccer, even in the most competitive seasons such as the Spain Primera División, if two or three specific teams are excluded, the remaining teams are basically flipping coins. Considering the sports where ability has a great weight, such as the NBA competition, we fitted a probabilistic graphical model to estimate the teams' abilities considering the successive games during a season and features such as the players' salaries and previous seasons statistics. We used MCMC to make inference about the underlying parameters. I expect to complete this work in January 2017 and to submit it to the coming KDD 2017. A preliminary version was presented in Portuguese in the Simpósio Brasileiro de Banco de Dados, the premier Brazilian database conference.

About my experience with machine learning and statistics, I work daily with Regression, Decision Trees and Clustering in my internship. I became proficient in multivariate analysis with Principal Component Analysis, Factor Analysis, and Generalized Linear Model in UFMG Junior Enterprise of Statistics. I program easily

in C, C++, Python, and R. I learned algorithms with the Cormen et al textbook and studied probabilistic graphical model with the recent Kevin Murphy textbook. I have a considerable knowledge in ML and PM, but I feel there are many new things to learn, such as deep learning, in order to be an excellent professional.

In all places that I studied, I have always been among the best students. As qualities, I'm a dedicated person and calm in stressful situations. I can adapt very easily to new environments and to what it demands from me. During my years at UFMG, I always studied and did some extra activities, such as Undergraduate Research or Internship. I wanted to enjoy the most of what the University could offer me. I presented two papers in national conferences and now I am working on a paper for my first international conference.

[REDACTED] At this moment, I have a working knowledge in reading and listening, but I have some issues on speaking and writing. I am proficient in English and I will take the TOEFL.

Attached to this email, I am sending my CV, transcripts and the abstract of my coming KDD 2017 submission.

My Github is [REDACTED] and LinkedIn profile is [REDACTED]

Thank you for your attention and waiting for your answer.

Sincerely,

[REDACTED]