

August 6, 2014

Dear Selection Jury

I write this motivation letter to formalize my application to the Investigation Grant for the project ID smartGeo Portal "Geographic Information Management System"

At this moment in time I have completed the Bachelor's Degree with an average grade of 15, and have already begun the Master's Degree, with a focus in Artificial Intelligence and Intelligent systems.

Throughout both degrees, I took particular attention and appreciation to algorithm development and optimization, having obtained my highest marks in the subjects most relevant to that area, such as Procedimental Programming, Algorithms and Data Structures and Advanced Programming. Through these subjects I have become proficient with the Programming language C. I have also become familiar with some essential optimization techniques, such as Dynamic Programming and Branch-and-Bound as well as Computational Geometry and Combinatorial problems.

Furthermore, I took these skills and applied them throughout the course by participating in programming contests with heavy focus on problem solving and algorithm optimization, such as Google's codejam and the national inter-university programming tournaments (TIUP) finally reaching second in the national inter-university programming marathon.

I started my researching path doing investigation in musical feature extraction for a musical emotional recognition program, and have also volunteered as a researcher helping to develop an algorithm to solve a uniformity problem. The latter shares some conceptual similarities to the project I am applying to.

As such, given both my interests and experience in this particular area, I feel that I make a good candidate to the grant.

Yours faithfully,

**João Valença**