Einholt 7
105 Reykjavík
Iceland

31. mars 2018

Uppsala University
Uppsala, Sweden

Dear members of the selection committee:

My name is Mikael Dubik and I'm writing to you to apply for the position of PhD on data analytics and machine learning for smart cities in Uppsala University (positionId=195506). I graduated with a Masters degree in Computer Science under direction of Senior Lecturer Matteo Magnani, who oversees UU-Infolab at Uppsala University. At Uppsala University the courses I completed were focused on data mining / machine learning and programming backend systems.

I am 28 years old, currently living in Reykjavík, Iceland and employed at Marorka, where I supervise the development of a data pipeline. My main interest lies in data collection, analysis and development of backend systems that support these computations. I spend my free time experimenting with machine learning, cooking and being outdoors (mostly cycling). I enjoy working in a team and I also have a proven record of independent work and research.

Ever since I started my studies in Computer Science I have been fascinated by automation and making computers taking independent decisions. Throughout my academic and professional career I have always worked on some aspect of machine learning, starting in my bachelor years. While studying for my bachelors degree I worked a summerjob for University of Iceland, where I integrated voice recognition software into a virtual environment and my bachelor thesis project was about implementing Augmented Reality software using OpenCV with Python.

When I graduated from University of Iceland I started work for a flight search engine, Dohop. Working for Dohop gave me the necessary experience designing backend infrastructure for data collection, data loading, data preprocessing and writing Python code. Afterwards I went to Uppsala University and completed my masters degree.

My main research contribution to data analytics and machine learning is in my dissertation, "A comparative evaluation of state-of-the-art community detection algorithms for multiplex networks"(diva2:1154983) where network clustering algorithms are implemented (a type of unsupervised learning) to analyze synthetic and real life networks. We analyzed different types of networks, synthetic and real, and since then I've been fascinated by these algorithms. I believe these algorithms have potential to be more developed and popularized so they can be used in more applications, for example in smart city planning. This dissertation gave me the necessary experience on reading academic papers and extracting the important information to contribute to new developments in this field of research.

Currently I am working at Marorka, which specializes itself in maritime analytics, emission reduction and ship fuel savings. At Marorka I got firsthand experience working in a cloud computing environment (AWS Systems and services) were I designed an ETL datapipe to accept and analyze data, with Apache Kafka.

My future research plans involve development and implementation of supervised and unsupervised (possibly a combination of both) machine learning algorithms and developing my understanding of them. I wish to specialize in this field so I can become an expert in machine learning. With my professional programming background, experience in data analysis and machine learning and high interes I believe I have the necessary qualification to contribute new information and software to this project. I am motivated and ready to take on a new challenge.

Attached to this letter is my CV that describes in detail my past achievements and experience. In addition, my reviewer has written a Letter of Recommendation which describes his experience working with me. I am available for further talks in a personal interview if more information is requested from me. If selected, my earliest starting date would be sometime in the beginning of August.

I would like to thank you for your time reading this letter and I hope to hear from you back.

Sincerely,

Mikael Dubik