

CELLAVISION

Cover letter

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Dear Hiring Manager

I am writing to you to express my Great interest for the position of "Junior Software engineer".

I saw your recruitment add on your website and found it very interesting. I particularly like that you use image analysis and neural networks to create products that help people. I have myself been training neural networks and convolutional neural networks for the last 6 months and would like to continue with this in a professional setting. The things I might be able to contribute to your company would be.

- I have a Masters in Mathematics from Linköpings University, the experience that I have from these studies in mathematics help me to be able to understand the meaning of mathematical formula and to generalize it to new problems.
- I also have a great interests in (convolution) neural networks and it's application to image processing, you can see a small example of an implementation I have done in digit recognition in Tensorflow **here**.
- To illustrate some of what I've learnt in the training of convolutional neural networks, I tried solving the histopathologic-cancer-detection challenge at kaggle.com, where one is asked to predict whether there is cancer in images of lymph node sections. To solve this problem with over 220 thousand pictures I had to use some common data techniques such as, data generators, splitting data in training, validation and test set, data augmentation, transfer learning, fixing initial layers after some time of training, test time augmentation was also used on the test set. When submitted to Kaggle this yielded a result of 97.07% only 0.86 percentile from the highest result. You can see the jupyter notebook **here**
- Some of my favorite courses during University were Matrix analysis, Linear algebra honors course and linear algebra which I think can help to make it easier to understand what different layers in the convolutional does. And I also believe it could help to develop new models.
- Further more I have some experience with **data processing** and **statistics** in R
- The things I primary would like to work with professionally is data processing , training and test of different kinds of neural networks and visualization of the result for domain experts, i.e class activation maps or other similiar techniques.

I would greatly appreciate the opportunity to meet with you to discuss what I have to bring to the position at CellaVision

Thank you for your time and consideration

Sincerely,

Hampus Hjelm Andersson