

July 21, 2016

Annie Wang and Elaine Lee  
Civis Analytics  
222 W Merchandise Mart Plaza  
Chicago, IL 60654

Subject: Application for the position of Data Research Engineer at Civis Analytics

Dear Annie Wang and Elaine Lee,

As a self-taught programmer and experienced engineer I'm passionate about learning and applying new things to interesting problems just like Data Research Engineer that Civis Analytics currently has posted.

I have recently built a convolutional neural network to identify brand images in photos that used transfer learning to save time and speed iterations. Using Keras, TensorFlow, and Python I was able to reimplement the VGG16 network originally discussed in this paper in [arXiv:1409.1556](https://arxiv.org/abs/1409.1556) and transfer model weights before fine-tuning the top network layers for a new application. I also this project as an opportunity learn new skills and implemented Docker containers. You can see more details in the GitHub repository for this project here: [chriskaschner.com/pretrained](https://chriskaschner.com/pretrained)

Additionally, once I realized that my existing dataset was too small to sufficiently train and validate my network, I leveraged Python and the Flickr API to search, download, and preprocess images

Although I have been honing my problem solving skills for a number of years this role would provide me the ability to continue adding to my machine learning skills by extending my abilities into larger data sets and political, geographic, and social networking data.

My combination of experience creating and refining successful software solutions and continual focus on improving my skills would be an immediate asset to Civis. I have attached a resume for your review and look forward to discussing this role more either by email or phone. I appreciate the opportunity to apply for such a great opportunity and thank you for your time.

Regards,

Chris Kaschner