Guido Zuidhof

I'm a self-starter (see GitHub) and am currently in my final year of the Artificial Intelligence master's programme at Radboud University. I'm looking for an internship in a commercial data science team starting early 2017 (for approximately 3 months).

Personal Data

Occupation:	Artificial Intelligence & Computing Science student
Location:	Nijmegen, The Netherlands
email:	me@guido.io

Education

Current September 2016-	Computing Science (Data Science specialization) Master of Science, **Radboud University**, Nijmegen
Current February 2015-	Artificial Intelligence Master of Science, **Radboud University**, Nijmegen
2011-2015	Kunstmatige Intelligentie (Artificial Intelligence) Bachelor of Science, **Radboud University**, Nijmegen
2005-2011	VWO High School, **S.G. Augustinianum**, Eindhoven

Work Experience

Current
February 2016-

Machine Learning Consultant at Legal Intelligence, Rotterdam
Search engine for legal documents

Involved in two projects: The first project has the goal of creating a system for automatic labeling of law area of documents. This metadata is often missing, but can be a valuable filter option when searching for legal documents. The second project involves personalized recommendations of new content based on previously saved documents.

February 2016-
June 2016

Teaching Assistant at Radboud University, Nijmegen
Artificial Intelligence Programme

Student teaching assistant for the *AI at the Web Scale* course, in which students learn about the actual application of AI techniques (mostly machine learning).

2015-2016

Student Assistant at Donders Institute, Nijmegen
Institute for Brain, Cognition and Behaviour

Developed various demos for the NoiseTagging project. NoiseTagging is a BCI (brain computer interface) technique where the user is capable of giving input by looking at flickering visual stimuli, which is classified from EEG data. These demos were developed using the Unity3D engine and targeted both desktop and mobile platforms.

Skills

Machine Learning:	Python (numpy, scipy, scikit-learn, pandas, theano, lasagne, tensorflow, gensim)
Programming:	Object-Oriented, Functional (elixir), Logic (prolog)
Workflow:	Version control (git), Agile (scrum), Automated testing (travis-ci)
Web Development:	HTML, CSS, JavaScript (vue.js, webrtc, react, meteor)
Game Development:	Unity3D (c#), three.js, Phaser

Notable projects

Summer - Autumn 2016
Detection of breast cancer in whole-slide images
Master's thesis project

Research internship at the Digital Pathology research group at RadboudUMC hospital Nijmegen involving the detection and characterization of breast malignant lesions in histopathology whole-slide images (WSIs) using stacked convolutional neural networks. WSIs are very high resolution (100,000x200,000 pixels) pictures of thin slices of tissue.

Summer 2016
LUNA16 - Lung Nodule Detection
Medical grand challenge - 1ST

Developed a system for automatic detection of pulmonary nodules in CT scans, which are the early manifestations of lung cancers. Achieved best performance in the nodule detection track, beating FDA approved commercially available systems by a wide margin.

Summer 2016
Ultrasound Nerve Segmentation
Kaggle machine learning competition - 9TH (top 1%)

Tackled the problem of identifying nerve structures in ultrasound images using a hybrid approach using classical computer vision features (SIFT) and an adapted version of the fully convolutional network Unet architecture.

Fall 2015 - Early 2016
Classifying law area of Dutch legal documents
Text mining project

Law area meta-data is often not present in in legal documents. Manual classification is a time-consuming process. Created a method to automatically solve this multi-label classification problem. A recall, precision and F-score of greater than 0.96 was achieved.

Summer 2015
Diabetic Retinopathy Detection
Kaggle machine learning competition - 11TH (top 2%)

Applied a convolutional neural network approach to automatically diagnose diabetic retinopathy, which is the leading cause of blindness in the US, from retina pictures. Trained on GPUs on a large cluster, achieving better than human expert performance.

Spring 2015
National data science bowl
Kaggle machine learning competition - 68TH (top 7%)

Developed a deep learning method for automatically classifying plankton from low resolution black and white images. Also helped develop a method for unsupervised feature extraction based on kNN clusters of image patches, which performed worse.

2011-2016
Miscellaneous
Hobby and university projects

Throughout the university completed many software projects, both curricular and extracurricular. These include a robot cooking assistant, a novel *Swype*-based input method for VR, video games, game plugins, 48 hour game development competitions (gamejams), an educational in-class quiz application, an optimizer for contextual bandit problems, a WebRTC signalling server, and a live in-browser plotting service. See GitHub profile.

Languages

Dutch: Native speaker
English: Full professional proficiency
French: Limited working proficiency
German: Elementary proficiency