Dan Saattrup Nielsen

Mathematician and Data Scientist

saattrupdan@gmail.com
+44 7397 240165
Bristol, United Kingdom
saattrupdan.github.io
linkedin.com/in/saattrupdan
github.com/saattrupdan

I am a final year PhD candidate in Mathematical Logic with an interest in the interaction between machines and human language.

EDUCATION

PhD in Mathematics
University of Bristol

09/2016 – Present — *Bristol, UK*

Courses
- Statistical Methods I & II
- Advanced Topics in AI

MSc in Mathematics
University of Copenhagen

09/2011 – 07/2016 — *Copenhagen, Denmark*

Courses
- Functional Programming
- Object-oriented Programming
- Database Programming

WORK EXPERIENCE

Data Study Group Facilitator
Alan Turing Institute

12/2019 – 12/2019 — *London, UK*

Achievements/Tasks
- Led a data science team of 14 PhD students for a week
- Worked with WWF to see if news data could be utilised to monitor protected sites around the world
- We correctly detect 96% of the news articles that present a potential threat to a protected site, with only 18% false positives

AI Researcher
Barbal Ltd

09/2019 – 12/2019 — *Bristol, UK*

Barbal develops a word processor designed for large-scale collaboration of technical documents

Achievements/Tasks
- Developed a machine learning model that identifies technical terms in construction standards, and set up an active learning pipeline to enable rapid labelling to improve the model's performance

Contact: Tom Bartley – tom@barbal.co

Teaching Assistant
University of Bristol and Copenhagen

01/2014 – Present — *Bristol and Copenhagen*

Achievements/Tasks
- In charge of weekly exercise sessions for undergraduate students in Mathematics, and gave lectures across multiple courses as well

SKILLS

Python | PyTorch | TensorFlow | Git | SQL

PERSONAL PROJECTS

Scholarly (05/2019 – Present)
- Classifies titles and abstracts of scientific articles into 148 categories and 6 aggregated "master" categories with a 93% and 65% sample-average F1 score, respectively
- The data consists of data from >1 million articles, scraped from the preprint server ArXiv and stored in a SQLite database
- Demo at saattrupdan.pythonanywhere.com/scholarly

[Package] NaturalSelection (08/2019 – 09/2019)
- Python package implementing a genetic algorithm to optimise hyperparameters of neural networks, with a Pythonic API

AutoPoet (09/2019 – 11/2019)
- Produce Haiku poems from text sources, which includes a machine learning model that counts syllables in English words with a 97% accuracy

CERTIFICATES

Natural Language Processing Nanodegree (09/2019 – 10/2019)
Udacity nanodegree

Deep Learning Certificate (06/2019 – 09/2019)
Coursera specialisation

Stanford Machine Learning (05/2019 – 06/2019)
Coursera course

IBM Data Science Certificate (04/2019 – 05/2019)
Coursera specialisation

LANGUAGES

Danish
Native or Bilingual Proficiency

English
Full Professional Proficiency

German
Limited Working Proficiency

Persian
Elementary Proficiency