Auss Abbood

aauss.github.io | Berlin, DE

Experiences

Researcher and Data Scientist at Robert Koch Institute, Berlin, Germany. October 2018 – Now
- Built a risk assessment pipeline for COVID-19 by combining tabular and text data, applying self-developed risk metrics, and predicting short-term risk, saving 1h of manual work daily
- Co-developed intensivregister.de (ICU surveillance) working on data engineering, visualization, and on-demand data analyses to support ICU management in Germany with up to several millions visits per day
- Automated key information extraction and relevance scoring for public health surveillance to potentially save epidemiologists 30 minutes of daily work
- Applied generative modeling to sensible health data to generate de-personified, sharable data
- Built collaborations with partners from the public and private sector from more than a dozen countries

Co-founder and Data Scientist at Communintelligence, Münster, Germany. October 2017 - January 2019
- Predicted bus delays with a mean error of only two minutes by analyzing multivariate bus traffic time series using random forests
- Data science and deep learning consultation for developers in a public utility company

Skills

Languages: Python (strong), R (intermediate), Java (intermediate), SQL (intermediate), Bash (good),

Tools: Altair, BeautifulSoup, gensim, Flair, Git, Luigi, matplotlib, NLTK, numpy, pandas, plotly, PyTorch, SciPy, Selenium, sklearn, spaCy, Statsmodels, TensorFlow

Spoken Languages: German (mother tongue), English (business fluent), Arabic (very good)

Publications/Conferences

- Understanding COVID-19 reporting behavior to support political decision-making: a retrospective cross-sectional study of COVID-19 data reported to WHO, *BMJ Open*
- General Framework for Evaluating Outbreak Prediction, Detection, and Annotation Algorithms, *preprint*
- Machine Learning for Health: Algorithm Auditing & Quality Control, Journal of Medical Systems*, Journal of Medical Systems*
- Use of Social-Media Data in an Epidemiological Context, supervised thesis
- EventEpi: A Natural Language Processing Framework for Event-Based Surveillance, *PLOS Computational Biology*
- Presented at *DGEpi 2019*, *ESCAIDE 2019*, *NeurIPS 2021*, *EPIDEMICS 8*

Education

Osnabrück University, Oct 2016 - Mai 2019
- M. Sc. in Cognitive Science with honors (German grade: 1.1; UK: first-class)
- Focus on artificial intelligence, neuroinformatics, and neuroscience

Goethe University Frankfurt, Oct 2013 – Sep 2016
- B. Sc. in Life Science with honors (German grade: 1.6; UK: upper second class)
- Focus on neuroscience, cell and molecular biology