ALEXANDER CZECH

DATA SCIENTIST

CONTACT

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SKILLS

- Python (expert)
- Apache Spark/pyspark (expert)
- AWS/EMR/EC2/S3 (proficient)
- Azure (Novice)
- Pandas/numpy (expert)
- scikit-learn/keras (proficient)
- nltk/gensim (proficient)
- keras/happytransformer (proficient)
- shell/R/Java/Scala/C++ (novice)
- PostgreSQL/PostGIS (expert)
- ESRI SERVER (proficient)
- Geoserver/Mapproxy (proficient)
- ArcGIS/QGIS/SAGA GIS/ENVI (expert)
- Jupyter/pycharm/RStudio/git
- Windows/Ubuntu/Office

LANGUAGES

German | Fluent (C2)
English | Fluent (C2)

EXPERIENCE

Data Architect

AK Wien | Vienna | 05/2021 - present

- **Architecture** and implementation of a **Data Management Platform** on Microsoft **Azure**
- Developed a **Web scraping** tool for evaluation of newspaper articles
- Creating **ETL pipelines** for clearing customer related data

Senior Data Scientist

DataScience Service GmbH | Vienna | 03/2020 - 04/2021

- **Project lead** for **data mining** unstructured text data from legal documents, for a range of features with **ML** and **NLP methods**
- Creating an **ETL pipeline** to vectorize large amounts of **Geo image data** and transforming it into **geospatial data** including label extraction
- **Data architecture** for spatial and spatial related data
- Developing **publication pipeline** for **geospatial data**, for an automated release from **PostGIS** to the web-frontend
- **Planing**, **coordination** and **execution** of research projects with external partners

Research Scientist

Vienna University of Technology | Vienna | 01/2016 - 02/2020

- Developed **Apache Spark** analysis pipelines, for **data mining** the common crawl corpus (364 TB), extracting weblinks, address strings, and determine document languages
- Teaching classes in **GIS**, **spatial analytics**, **statistics** and **Python** programming
- Overhauling the GIS class to integrate **E-learning elements** and combining them with the best parts of in person teaching
- Developed and maintained a tool for automated quantitative student homework evaluation in **Python** and **Pandas,** enabling lecturers to focus more time on the students

Technical Support Engineer

Deiser Compact Computing | Vienna | 06/ 2012 - 09/2015

- First and second level B2B **IT-Support**
- Hardware, infrastructure and server deployments for clients
- Developed and maintained an in-house ticketing system based on **Python**, **Bottle** and **SQLite**

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INTERESTS

Krav Maga, Archery, Board Games, Skiing, Reddit, Diving, Solo travel, Technology, PC Hardware, Minesweeper, Computer Games, Geopolitics, Cinema, Cooking, Baking, Geocaching

FAVORITE BOOKS

- Zen and the Art of Motorcycle Maintenance
- Lord of the Rings
- The Hobbit
- Krabat
- Watchmen
- The Age of Surveillance Capitalism
- The Ministry for the Future
- 1Q84
- The Dark Tower
- Cryptonomicon
- The Diamond Age
- Half of a Yellow Sun

EXPERIENCE (CONTINUED)

Freelance GIS Analyst

Vienna University of Technology | Vienna | 04/2012 - 11/2014

- **Geostatistical modeling** for solar and wind energy potential in Europe and North Africa, embedded in a larger project focusing on an 100% renewable energy European electricity grid
- Implemented with **ArcGIS ModelBuilder** and **arcpy**

Undergraduate Research Assistant

University of Hamburg | Hamburg | 10/2008 - 09/2011

- Developed and maintained multi source **Python based** climate data ingestion platform for **PostgreSQL**
- Developed automated **GIS analysis pipeline** in **Python**, **C++** and **Saga GIS**

GIS and Statistics Tutor

University of Hamburg | Hamburg | 10/2008 - 09/2011

- Supporting the teaching staff in preparing lectures
- Worked in the whole range of **quantitative** classes **Statistics** 1-3; **GIS** 1, 2; and **Remote Sensing** 1, 2

EDUCATION

PhD (ongoing), Data Science (Faculty for Spatial Planning)

Vienna University of Technology | Vienna | since 2016

- Urban system centrality, data mining, graph analysis, and NLP

Master of Science, Geoinformation Science

University of Vienna | Vienna | 2015 | with distinction

- Information retrieval, data mining, programming location-based services

Bachelor of Science, Geography

University of Hamburg | Hamburg | 2011

- Emphasis on statistics, GIS and geoscientific programming