JENICA ANDERSEN
DATA SCIENTIST

Experience

Metis — Worked Remotely
Data Scientist
Dec. 2021 to Aug. 2022
- Completed 7-month Data Science fellowship focusing on Machine Learning, Statistical Analysis, Predictive Modeling, Deep Learning, Data Engineering and Business Intelligence
- Developed computational algorithms and used statistical methods to find patterns and relationships in large volumes of data
- Portfolio contains 7 end-to-end, independent projects with Business Unit application as focus

AIM GeoAnalytics — Missoula, MT
Senior Geologist, Data Analyst
Dec. 2013 to Dec. 2019
- Managed projects, facilitated client workshops, conducted trainings, and presented at professional conferences
- My work guided clients' decisions and contributed to the creation of a subsidiary company.
- Collected and analyzed diverse data, identifying parameters of interest, and building predictive models. Delivered results

Dartmouth College — Hanover, NH
Adjunct Faculty
Sept. 2011 to Aug. 2013
- Lectured weekly, instructed laboratory sections, aided field trips and mentored students

Statoil Hydro — Stavanger, Norway
Exploration Geologist Intern
June 2010 to Aug. 2010
- Explored and visualized diverse data, modeling findings and discovering a lead on a new resource in the North Sea
- Presented results to audiences with a range of expertise and was offered funding to continue the research

Sunburst Consulting — Billings, MT
Lead Geologic Consultant
Aug. 2009 to Aug. 2011
- Lead operations by setting goal roadmaps, achieving key milestones, and reporting key metrics.
- Successfully integrated multiple data types to guide high-risk decisions and steer operations, responded to inquiries and requirements, advised cross-discipline personnel and collaborated with clients
- Published reports with state governments and stakeholders across the enterprise

Projects

The State of ESG: Using NLP to Illuminate Modern Corporate Sustainability Issues
- Conducted Unsupervised NLP on 1,000 shareholder resolutions from ceres.org, modeling the top semantically coherent topics
- Preprocessed corpus with Regex and Porter stemmer, used CountVectorizer and NMF for modeling and clustering, modeled sentiment analysis
- Visualized results with MatplotLib and Wordcloud, and demonstrated specific application via custom Streamlit app

Mobilization of mercury-contaminated sediment in a regulated river, Androscoggin River, northern New Hampshire
- Master's thesis advanced on-going research on the fate of contaminants in rivers and oceans
- Monitoring such as this informs larger regulatory requirements
- Defended research and presented published findings and at Geological Society of America conference

Engineering a Data Pipeline for Topic Modeling the New York Times
- Deployed API get-request to obtain 747,000 article archives, converted json to tabular data, stored in SQL database in AWS S3, processed in EC2
- Launched end-user controlled Streamlit App for topic modeling and WordCloud creation

Deep Learning for Conservation: Classifying Drone Images from Protected Lands
- Created custom Convolution Neural Networks (Tensorflow and Keras) to classify 21,500 low-resolution images from Kaggle dataset as containing columnar cacti or not
- Custom model contained rescaling, BatchNormalization, SeparableConv2D, MaxPooling2D, GlobalAveragePooling, and Dropout layers and achieved accuracy of 99.3, out performing MobileNet transfer learning model trained on the ImageNet database

"How I Wonder What You Are", Classifying Cosmic Light Sources, Using Logistic Regression
- Built Logistic Regression, kNN and Random Forest models for multi class classification of point sources of light
- Used MinMaxScaler, RandomizedSearchCV and GridSearchCV; achieved ROC score of 0.9983

Biogeochemical monitoring of geological CO2 storage in saline aquifers
- Undergraduate thesis work assisted with researching effects of CO_2 injection into the subsurface as part of multinational Ketzin Group in Potsdam, Germany

Education

Dartmouth College — 2011 to 2013
Master's of Science, Earth Sciences

National Geothermal Academy — 2013 to 2013
Studied geologic, engineering, and economic solutions in geothermal energy production with top industry experts

University of Potsdam, Germany — 2008 to 2009
Bachelor's of Science, Dual Degree--International Field Geosciences

University of Montana, Missoula — 2004 to 2008
Bachelor's of Science, Geosciences
Bachelor's of Arts, Creative Writing
Watkins Scholar

Contact

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- in jenica-andersen
- ⌨ jenica-a

Skills

MANAGEMENT
Business Intelligence
Customer Relations
Public Speaking
Agile Project Management
Data Management

PROGRAMMING
Python
SciKit-Learn
SQL
Web Scraping
json
Streamlit
Familiar with R

MACHINE LEARNING
Natural Language Processing
Deep Learning
CNN
NMF
kNN
RandomForest
Sentiment Analysis
Linear/Logistic Regression
TensorFlow/Keras
NLTK
PCA
TF-IDF

CLOUD COMPUTING
GitHub
AWS (S2 and EC3)

VISUALIZATION
Tableau
PowerBI
MatplotLib
Seaborn
GIS/QGIS

LANGUAGES
English (native)
German

Volunteering

Women in Data Science, Seattle ·
Co-Lead Marketing Team — Current

Clark Fork School ·
Vice President of Board of Directors
Missoula, MT — 2018 to Current

Toastmasters Club · President
Missoula, MT — 2017 to 2020