

CRYSTAL HUANG

DATA SCIENCE + ANALYTICS

CONTACT

✉ crystalhuang.ds@gmail.com
🌐 www.crystaldatasys.com
☎ (917)698-5471
📍 Middletown, RI 02842
in crystal-huang-ds
🔗 crystal-ctrl

SKILLS

PROGRAMMING

Python
SQL
HTML

DATA VISUALIZATION

Tableau
Matplotlib
Seaborn
Plotly
Bokeh
pyLDAvis

MACHINE LEARNING

Regression
Classification
Topic Modeling
Natural Language Processing
Convolutional Neural Networks

PACKAGES

Numpy
Pandas
Scikit-Learn
Tensorflow
Keras
NLTK
SpaCy
gensim
OpenCV
Spark
BeautifulSoup
Selenium
Statsmodels

TOOLS + DATA

Google Cloud
Git/GitHub
Excel
PowerPoint
MongoDB
Streamlit
Flask
DASH

EXPERIENCE

METIS · Remote

Data Science Teaching Assistant · Aug. 2021 to Current

- Supports teaching Data Science students at Metis with review sessions
- Provides individual instruction in data analytics in Python, machine learning, deep learning, NLP, SQL, and more
- Debugs student code, builds student presentation skills, organizes Zoom rooms for effective pedagogy

Data Science + Machine Learning · Mar. 2021 to July 2021

Completed an intensive 14-week ACCET-accredited full-time immersive with a project-based curriculum focused on Python programming, data visualization, database querying and management, machine learning, and deep learning. See project section.

TRIDENTCARE · Virginia Beach, VA

Lead Radiology Technologist/Sonographer · Aug. 2020 to Jan. 2021

- Coordinated field operation to increase workflow efficiency and achieve customer satisfaction
- Designed feedback report that increased staff compliance with new COVID guidelines
- Developed and Organized spreadsheets to solve operational problems and improve communication among staff

Sonographer/Echocardiographer · Aug. 2018 to Aug. 2020

- Operated and examined sonograms and echocardiograms for medical diagnosis
- Excelled in field operations and achieved 90% production rate consistently

PROJECTS

Face Mask Detection Using Deep Learning and Computer Vision

- Created binary and multi-class image classification models classifying faces mask status using convolutional neural network
- Trained and optimized the model using 12k images on Google Cloud Platform
- Used OpenCV and Haar Cascade Classifier as face detector and applied mask detector on the faces detected on images showing an accuracy score of 0.99

Building an End-to-End Pipeline with Real-Time Virginia COVID-19 Data

- Developed an end-to-end data pipeline with automated data extraction and update via cron
- Created interactive Plotly Dash Dashboard and deployed on Heroku
- Implemented SQL database for accessible querying on the backend

Discovering COVID-19 Research Articles with NLP and ML Topic Modeling

- Leveraged NLTK, SpaCy, langdetect and Gensim for text processing on 260k research article abstracts
- Built LDA model to discover topics of research articles and created data visualization with pyLDAvis

Predicting Kickstarter Campaign Success with ML Classification

- Built and scored a total of 9 models with a final XGBoost model with 80% F1 score
- Created meaningful data visualizations with SHAP for feature importance

Identifying NYC Restaurant Health Code Violation with 311 Call Rodent Sighting

- Created a well-scoped project proposal and preliminary data analysis to present to NYC Department of Health, identifying ratty-kitchen hotspots for possible restaurant health code violation by better understanding rodent sighting pattern in various neighborhoods in NYC
- Implementation of SQL database for storage and ingested data into Excel for data manipulation and organization with use of VLOOKUP and pivot tables
- Built an interactive Tableau maps and dashboard

EDUCATION

Rutgers University

B.S. Exercise Physiology; Minor in Psychology 2015

Western Suffolk BOCES

Certificate Diagnostic Medical Sonography 2018