KUNDAN CHAUDHARY, PH.D.
DATA SCIENTIST

Employment

Metis
San Francisco
Data Scientist
Jan. 2020 to Current

Metis is an ACCET-accredited 12-week immersive data science bootcamp with a project-based curriculum focused on Python, statistics, supervised and unsupervised machine learning, data analysis, database management, and data visualization. Created five end-to-end projects utilizing real-world data. Select projects include:

Assisting Blind People Navigate Cities via Image Captioning & Object Recognition:
-Developed an image captioning model for a general description of scene/image
-Created an object recognition model for a detailed description of the objects in image/video
-*Modeling techniques included:* convolutional neural networks, recurrent neural networks, natural language processing, and transfer learning

Using NLP to Classify If a Given Online Comment is Toxic or Not:
-Created MongoDB to host data running on AWS EC2 instance
-*Modeling techniques included:* latent semantic analysis, latent dirichlet allocation, non-negative matrix factorization, and clustering methods such as k-means, mean shift, t-SNE, and DBSCAN

Achieving a Near-Perfect Multiclass Classification of Image Dataset :
-Created a multiclass image (scene) classification model for drone technology
-*Modeling techniques included:* random forest, logistic regression, k-nearest neighbors, support vector machines, XGBoost, and convolutional neural networks

Predicting Movie Revenue from IMDB Dataset:
-Scraped data from IMDB using Beautiful Soup
-*Modeling techniques included:* linear, ridge, and polynomial regression

Apple Inc.
Cupertino, CA
Analyst-Display Technology
Mar. 2019 to Jan. 2020

-Analyzed large quantity parametric data from engineering development and mass production to extract meaningful information for improving future Apple products
-Performed Monte Carlo simulations with OLED display data to improve display performance
-Worked w/ engineers to assess key metrics during both development & production phases
-Tools included: Matlab and Python

Harvard University
Cambridge, MA
Graduate Research Assistant
Aug. 2012 to Sept. 2018

-Designed optical structures (waveguides, resonators, metasurfaces) using Python
-Analyzed large scale hyperspectral near-field imaging data using Python
-Collaborated with multiple research groups at Harvard, Columbia, UIUC, and MIT
-Published 15 peer-reviewed papers in highly-ranked journals (including Nature Communications/Science Advances)

Cambridge, MA
Research Fellow
Oct. 2018 to Mar. 2019

-Implemented neural networks using Python to solve inverse design problems in photonics

Cambridge, MA
Teaching Fellow
Jan. 2016 to May 2016

-Introduced machine learning tools such as deep neural networks to a class of ~40 students

University of Illinois at Urbana-Champaign
Urbana, IL
Research Assistant
Jan. 2011 to Aug. 2012

-Analyzed confocal images/videos to study the 2D & 3D spatial/temporal dynamics of colloids
-Tools included: Matlab

Contact

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https://github.com/kundanchaudhary

Education

Harvard University
Aug. 2012 to Sept. 2018
Ph.D. Applied Physics 2018
M.Sc. Applied Physics 2015

Illinois Wesleyan University
Aug. 2007 to Dec. 2010
B.S. Physics/Mathematics 2011
Summa Cum Laude (GPA: 3.94/4)

Skills

LANGUAGE & TOOLS
Git/GitHub
Python
HTML
Flask

MACHINE LEARNING
Linear Regression & Regularization
Classification & Clustering Models
Natural Language Processing
Convolutional Neural Networks
Recurrent Neural Networks
Decision Trees & Random Forest
Time-Series Forecasting

DATABASE & CLOUD COMPUTING
PostgreSQL/MongoDB
Spark/Hadoop
AWS/GCP

DATA VISUALIZATION
Seaborn/Matplotlib
Tableau

PACKAGES
Pandas/Dask
Scikit-learn
TensorFlow/Keras
OpenCV
BeautifulSoup
NLTK
PyTorch