

MARYAM GHASERI

Summary

Curious and results-oriented data scientist with a background in mathematics and statistics as well as a strong business acumen to complement technical skills.

Data Science Projects

AI Generated Audio Captions For Images

- Extracted feature vectors from images using CNN and transfer learning
- Preprocessed text data (image descriptions) using word embedding and LSTM model
- Created a neural network model using images and text data that can generate captions for new images
- Converted captions to speech using Google's WaveNet

Topic Modeling and Recommendation System

- Analyzed Amazon reviews for headphones using Natural Language Processing (NLP) and extracted topical features using Non-negative Matrix Factorization (NMF) and TF-IDF
- Constructed a content-based recommender system using cosine similarity, to help customers find the desired product based on other customers' reviews
- Performed sentiment analysis to understand customers' attitude, sentiments, and emotions
- Performed exploratory data analysis (EDA) on reviews

Predicting A Startups' Success

- Used CrunchBase company fundings dataset to predict if a startup will be successful (IPO or acquisition), using supervised classification models such as Logistic Regression, Random Forest, and XGBoost
- Created a Flask app to predict the probability of success of a company based on its funding information, location, and industry

Predicting Property Prices in Seattle

- Scraped data for sold properties in Seattle from Trulia, using BeautifulSoup and Selenium
- Collected demographics data such as average income, average education, and racial breakout per zip code and added to the housing data
- Predicted property prices using feature engineering and models such as Linear Regression and Polynomial Regression

Experience

Metis Data Scientist

New York, NY
June 2020 to Current

- Completed a 12-week immersive data science bootcamp with a focus on Python programming, data engineering, machine learning, and communication
- Designed and built end-to-end projects to utilize data science in consumer market scenarios; see project section for details

PwC Actuarial Manager

New York, NY
Apr. 2013 to Current

- Consult with employers on solutions for their pension and health & welfare plans, including actuarial valuations, accounting, funding, plan design, and plan administration
- Consult with clients to mitigate the risks associated with their defined benefit pension plans, and advise on solutions such as plan termination, annuity placements, and moving to defined contribution plans
- Perform M&A due diligence for pensions, retirement, and health & welfare plans
- Lead and manage multiple project teams
- Mentor Associates and Senior Associates and provide official feedback, semiannually

University of Illinois at Urbana Champaign Teaching Assistant

Urbana Champaign, IL
Jan. 2012 to Dec. 2012

- Instructed three sections totaling 103 students in advanced actuarial statistics courses
- Responded to students' questions in class and via email
- Completed and evaluated semimonthly quizzes

Contact

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Skills

MACHINE LEARNING

Regression
Classification
Natural Language Processing
Unsupervised Learning
Image Classification
Deep Learning

TOOLS AND LIBRARIES

Python
SQL
SAS
Scikit-learn
NLTK
Pandas
Numpy
Seaborn
Keras
HTML
Tableau
Alteryx

DATA MANAGEMENT / CLOUD TOOLS

Google Cloud
Git / Github
Postgres

Education

University of Illinois at Urbana-Champaign

M.S. in Actuarial Science 2012

Shahid Beheshti University

B.S. in Applied Mathematics 2008

Certifications

Associate of Society of Actuaries

Member of American Academy of Actuaries

SAS Base Programmer certificate exam