Yongjin Jiang

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Portfolio: https://yongjinjiang.github.io/portfolio/

Personal Statement

Data Scientist with nearly twenty years' experience in coding and modeling in the field of theoretical physics. Successfully published about 30 scientific papers and won an outstanding researcher award. A graduate from the University of Minnesota, *Data Visualization and Analytics* Program. Proven ability in performing data visualization &analytics using Python, JavaScript, R, Tableau, MySQL/MongoDB, Machine Learning/Deep Learning, and more. A creative, critical thinker and an efficient learner in employing advanced skills to implement automation, maximize scalability and drive feasible results.

Education/Certificates

- Data Visualization and analytics Bootcamp(finished), University of Minnesota *2018.8-2019.2*
  A 24-week intensive program focused on gaining technical programming skills in Excel, VBA, Python, R, JavaScript, SQL Databases, Tableau, Statistics, Big Data and Machine Learning.
- Deep Learning Specialization(finished), Coursera online course *2018.10-2019.2*
  Learned about Convolutional networks, RNNs, LSTM, Adam, Dropout, BatchNorm, Xavier/He initialization, and more. Worked on case studies from healthcare, autonomous driving, sign language reading, music generation, and natural language processing. Mastered not only the theory, but also how it is applied in industry.
- Ph.D. in Theoretical Physics, Fudan University (Top 5, P.R. China) *2002.7*

Important Experiences

- Postdoc Associate & Visiting Scholar, University of Minnesota *2015.1-2017.6*
- Faculty, Physics department of Zhejiang Normal University, China *2004.9-2014.12*

Skills

- *Databases:* MySQL, MongoDB, SQLite
- *Programming:* Python, JavaScript, Excel/VBA, R, Tableau, MATLAB, Mathematica, Fortran, Jupyter Notebook
- *Machine Learning:* Logistic/Linear/kNN Regression, Decision tree, Random forest, SVM, Convolutional Neural Network (CNN), Recurrent Neural Network (RNN), Scikit-learn, TensorFlow, Keras
- *Mathematics:* Calculus, Linear Algebra, Complex Function Analysis, Group Theory, Numerical Optimization, Numerical Linear Algebra, Green's function, Kernel Methods, Advanced Statistics
- *Others:* git/GitHub, social data mining, web scraping, Heroku, google cloud platform, google colab

Selected Projects (see my portfolio for more projects):

- D3 Journalism 2018 (link) (*Demo*)
  *An **interactive data visualization** tool is provided for a series of feature stories about the health risks facing particular demographics of the United states**. Selectable features** for both axes. **d3.js** is heavily used in this app.*
- Global Earthquake Map 2018 (link) (*Demo*)
  *A **real time global earthquake map** (for past 7 days) is shown with a dropdown for layer choice. **Leaflet.js** and **GeoJSON** data format is leveraged upon.*
- Web Scraping: Mission To Mars *2018* (link) (*Demo*)
  ***Web scraping** for real time news about Mars: Python packages like **requests, BeautifulSoup, selenium, pymongo, flask** are used. Deployed on **Heroku** (note for demo: refresh the /scrape page for a few times if somehow it stopped working).*
- Music generation 2019 (link) (*Demo*)
  *Using **Recursive Neural Network (RNN)** to train music input and generate new pieces of similar style, used **LSTM Network**, **Keras, TensorFlow**. Deployed in **Heroku**.*

Honors/Awards/Activities

- Award for Distinguished publication during the 2005-2010 period in ZheJiang Province, P.R. China, 2012
- Academic leadership for young and middle-aged scientists in ZheJiang province, P.R. China, 2013
- Referee for *Physical Review Letters*, *Physical Review B* and several other Physics Journals.