

Ziwan Deng

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Four Winds Drive, North York, Ontario, M3J 2S8

PROFESSIONAL SUMMARY

A senior data scientist with extensive experience in quantitative and qualitative data analysis. Highly organized, self-motivated, and proficient with computers. Seek to use my proven data science skills to help management identify new revenue opportunities and make smart decisions.

- Ph.D degree in Applied Statistics and Post-doctoral in Applied Mathematics
- 15+ years of experience in data analysis and skilled with a wide variety of ML models
- 10+ years of teaching courses of mathematics, computer languages and climate change
- Strong ability to adapt to different computing environments(Python, R, Fortran, Matlab,Windows, Linux, Docker, Pycharm and Jupyter Notebook)
- Experience with many Python packages (Tensorflow, KNIME, Keras,TPOT,Nltk, Spacy, TextBlob and Gensim,Dash, etc.)
- Proficient in data visualization (e.g.,Highchart, Kibana, Tableau, PowerBI, OpenCV, FFmpeg, D3, ArcGIS and GeoPandas)
- Knowledgeable and good at creating, managing and analyzing big data (Apache Hadoop, Apache Spark, Apache Nifi, ELK, PySpark, SparkSQL)
- Self starter, fast learner, hard worker, entrepreneurial spirit and teamwork spirit, able to carry out projects with little supervision

WORK EXPERIENCE

Chief Scientist

Jun 2020 - Present

DeepVisum Corp. • Toronto, Ontario

- Leading DV's R&D team to develop AI models for global agricultural commodity production and price prediction (Weather and Finance)
- Developing AI models for TSX60 and S&P500 stock price prediction (Big data and Deep learning)

Post-Doctoral and Climatologist

Mar 2013 - Jul 2020

York University • Toronto, Ontario

- Developed and maintained the Ontario Climate Data Portal (yorku.ca/ocdp)
- Developed statistical and machine learning models for predicting West Nile virus disease and producing terabytes of climate change data specific for Ontario
- Authored over 20 papers published and over 30 professional reports for Ontario Government
- Led the climate change team and carried out five data analysis projects funded by Canadian federal or Ontario provincial government
- Provided climate change consulting services to Ontario Governments
- Taught several mathematics courses
- Acted as technical leader providing professional guidance to colleagues and subordinate

Post-doctoral and Research Scientist

Sep 2005 - Feb 2012

UNBC • Prince George, British Columbia

- Developed data assimilation systems to integrate multiple source data into atmosphere/ocean prediction models (High Performance Computing)

Assistant, Associate professor and vice Dean

Sep 2002 - Aug 2005

Nanjing University of Information Science & Technology • Nanjing

- Managed the Department of Geographic Information Systems
- Taught Statistics, C++, Geographic Information systems (GIS), Statistical Climatology
- Processed satellite image for assessment of climate change impacts
- Developed Artificial Neural Networks models for climate prediction

EDUCATION

PhD in Statistical Climatology

Sep 1999 - Jul 2002

Nanjing University of Information Science & Technology • Nanjing

Dissertation: Predictive modeling of locust outbreak in the Qinghai Lake Region using 3S(GIS, RS and GPS) and weather data

Master in Statistical Climatology

Sep 1993 - Aug 1996

Nanjing University • Nanjing

Dissertation: Application of wavelet transformation in global climate change data analysis

SKILLS

- 10+years: Data analytics, Statistical Learning, Machine Learning, Matlab, Fortran, ArcGIS
- 5~10 years: Python,R, SQL, JavaScript, HTML5, Angular.js, Drupal, WordPress, D3.js, Git
- 1~5years: Keras, Tensorflow, Tableau, PowerBI, ELK, TPOT, PySpark, Nifi, SparkSQL, MongoDB, Docker, Nltk, TextBlob, Spacy and Gensim
- Less 1-year: OpenCV, FFmpeg, Geopandas

PROFESSIONAL CREDENTIALS

- Membership in the Canadian Meteorological and Oceanographic Society

RECENT TOP PUBLICATIONS

- <https://twitter.com/Ai2Stock>; <https://www.facebook.com/ziwang.deng/>; <https://www.linkedin.com/in/ziwang-deng-37018454/>
- Zhu, Huaiping, ... Deng. "The Ontario Climate Data Portal, a user-friendly portal of Ontario-specific climate projections." *Scientific Data* 7.1 (2020): 1-10. (<https://www.nature.com/articles/s41597-020-0489-4>)
- Deng, Ziwang, et al. "Downscaling RCP8.5 daily temperatures and precipitation in Ontario using localized ensemble optimal interpolation (EnOI) and bias correction." *Climate dynamics* (2018): 1-21.
- Deng, Ziwang, et al. "Projection of Temperature and Precipitation Related Climatic Design Data Using CMIP5 Multi-Model Ensemble: A case study for Ontario, Canada under RCP 6.0." *Journal of Buildings and Sustainability* 1.1 (2018).

- Deng, Ziwang, et al. "Trend in frequency of extreme precipitation events over Ontario from ensembles of multiple GCMs." *Climate dynamics* 46.9-10 (2016): 2909-2921.