

# JUNCHI BIN

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## PROFESSIONAL EXPERIENCE

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**Data Nerds, Canada**, Research Intern - Data Scientist Dec. 2016 - Present

- This is an industrially defined project in collaboration with Mitacs Canada for Automated valuation model (AVM).
- Researching applied machine learning algorithm for AVM.
- The investigation of spatial-dependence model is completed, and the results are improved compared with the contemporary regression model.
- Currently, we are developing a new spatial-temporal model based on the residual neural network for AVM.

**University of British Columbia, Canada**, Research Assistant Sept. 2016 - Present

- Responsible for research on urban computing and computational intelligence.

**CLP Power Limited Guangxi Power Plant, China**, Engineering Intern Jul. 2014 - Aug. 2014

- Maintaining and monitoring device in power plant.
- Learning how power plant generates electricity.

## RESEARCH PROJECTS

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**Appraisal of Real Estates Based on Satellite Images**, Data Nerds & UBC 2017 - Present

- Conducted research on regression models for appraisal of real estate with satellite images.

**LSTM-Based Peer-Dependence Regression Model**, Data Nerds & UBC 2016 - 2017

- Identifying deep learning algorithms with better performance for AVM through a comparative study.
- Proposed a LSTM-based algorithm to predict house price with consideration of neighborhoods.

## PUBLICATIONS

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**Bin, J.**, Tang, S., Wang, G., Liu, Y., Gardiner, B., Liu, Z. and Li, E.. Regression Model for Appraisal of Real Estate using Recurrent Neural Network and Boosting Tree. *IEEE 2017 International Conference on Computational Intelligence and Applications (ICCI)*.

**Bin, J.**, Gardiner, B., Liu, Z. and Li, E.. Peer-dependence Valuation Model for Appraisal of Real Estate. *Neural Processing Letters*. **Submitted**.

Zhang, C., **Bin, J.** and Liu, Z.. Wind Turbine Ice Assessment through Inductive Transfer Learning. *IEEE 2018 International Instrumentation and Measurement Technology Conference (I2MTC)*. **Under Reviewing (Corresponding Author)**.

Liu, H., Liu, Z., Liu, S., Liu, Y., **Bin, J.** and Shi, F.. A Nonlinear Regression Application Via Machine Learning Techniques for Geomagnetic Data Reconstruction Processing. *IEEE Transactions on Geoscience and Remote Sensing*. **Under Reviewing**.

## EDUCATION

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<b>University of British Columbia</b> , Kelowna, Canada M.A.Sc in Electrical Engineering (Thesis-Based Program) Supervisors: Dr. Zheng Liu and Dr. Eric Li	Sept. 2016 - Present
<b>Northern Arizona University</b> , Flagstaff, United States B.S. in Electrical Engineering Dual-degree with Chang'an University	Aug. 2013 - May 2016
<b>Chang'an University</b> , Xi'an, China B.Eng. in Automation	Aug. 2012 - Jun. 2013

## AWARDS

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Student Travel Award from Statistical Society of Canada	Mar. 2017
Dean's List (4 times) in Northern Arizona University	Aug. 2013 - May 2016

## PRESENTATION

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The 2nd IEEE International Conference on Computational Intelligence and Applications	Sept. 2017
The 45th Annual Meeting of the Statistical Society of Canada, Presented Poster	Jun. 2017

## TEACHING EXPERIENCE

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<b>University of British Columbia</b> , Teaching Assistant	Sept. 2017 - Present
<ul style="list-style-type: none"><li>· Course: APSC254 - Instrumentation and Data Analysis.</li><li>· Hosting tutorial session to help students with their homeworks, experiments and examination.</li></ul>	
<b>Northern Arizona University</b> , Teaching Assistant	Sept. 2015 - May 2016
<ul style="list-style-type: none"><li>· Courses: EE348 - Signal Processing and EE188 - Introduction to Electrical Engineering.</li><li>· Help professor grade assignment, lab reports, and exams. Moreover, make answers for each assignment and exams.</li></ul>	

## EXTRACURRICULAR ACTIVITIES

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IEEE International "Sensors and Measurement" Student Contest (IEEE IS&M-SC)	May 2018
Child Protection Hackathon 2017, Hosted by Two Hat Security and Microsoft	Jul. 2017
Member in Institute Science & Technology Association in Chang'an University	Aug. 2012 - Jun. 2013

## SKILLS

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<b>Research Interest</b>	Machine Learning, Urban Computing, Sensory Data
<b>Programming Skills</b>	R, C#, Python, SQL, Matlab, VHDL
<b>Engineering Skills</b>	Microelectronic, Circuitry, Signal System, Automation System
<b>Design Software</b>	Rstudio, Matlab, Visual Studio, MS Azure, Pycharm, Modelsim, Quartus, AutoCAD
<b>Language</b>	Fluent in English, Mandarin, Cantonese