

XIN LI

516 W Jefferson St, Tallahassee, Florida 32301
(617)952-2785 ◊ linux100@gmail.com ◊ <https://xin-li.me>

EDUCATION

Florida State University	Ph.D. in Applied Mathematics	<i>August 2014 - Present</i>
Northeastern University	M.S. in Applied Mathematics	<i>August 2011 - May 2013</i>
Hebei Normal University	B.S. in Mathematics	<i>August 2006 - June 2010</i>

EMPLOYMENT

Raytheon BBN Technologies, Cambridge, MA May 2013 - August 2013
Research Scientist, Intern

- Conducted research on Information Theory and supported other scientists with weekly research report.
- Implemented time and entropy-based feature functions in Python to detect PTSD from EEG data.
- Optimized existing C++ library for signal processing and achieve 5x faster execution results.

Northeastern University and Florida State University August 2011 - Present
Solo Instructor/Senior Mentor/Teaching Assistant

- Taught Pre-Calc Algebra, Calculus I, Calculus III, Discrete Math, Business Calculus and Financial Risk Management (graduate level) to over 500 students.
- Mentored and lead 10 Ph.D. student instructors in teaching Calculus.

PROJECTS

Github <https://github.com/linux100>
Deep Neural Network trained with Filtering methods for NLP

- Designed and Implemented DHIPF-RNN algorithm for sequential text classification.
- Improved the performance of RNN in stochastic data processing with implicit sampling methods.
- Utilized: Implicit Sampling, Homotopy Method, Python, RNN(LSTM, GRU), Tensorflow, Torch

Object Tracking and State Estimation using Sequential Monte Carlo methods

- Designed new filtering algorithm for hidden state estimation, tested on Double-Well Potential model and Lorenz tractor and achieved better accuracy than traditional filtering methods.
- Improved the traditional nonlinear tracking algorithms by using homotopy method to enable the tracking of objects with sudden shift.
- Utilized: Kalman Filter, Particle Filters, MATLAB, Latex

Pattern Recognition using Variable Length Markov Chain Model

- Wrote 5,000+ lines of R code for the applications in detection of the author of literature, the pattern in stock movement and the signal before earthquake.
- Utilized: R, Git, Parallel Computing, Hypothesis Test, Bayesian Inference, PCA

PROGRAMMING SKILLS AND TOOLS

Python,R, MATLAB, C++, SQL, Spark, Git, RNN(LSTM,GRU), Regression Algorithms, SVM, PCA, Particle Filter, Ensemble Kalman Filter, Implicit Sampling, Markdown, HTML

CERTIFICATE

August 2017 **Neural Networks and Deep Learning**, deeplearning.ai
July 2017 **Machine Learning**, Stanford university