Chunli Peng

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EDUCATION

New York University   New York, NY
M.S. in Mathematics - GPA: 3.56   Sep 2020 – Present
- Subspecialty in Data Science
- *Coursework:* Deep Learning, Machine Learning, Big Data, Linear Algebra, Real Analysis, Convex Function Optimization, Scientific Computation, Computational Statistics.

Hubei University of Technology   Wuhan, China
B.S. in Applied Statistics & B.Econ. in Finance - GPA: 3.64   Sep 2014 - June 2018
- *Coursework:* Mathematical Modeling, Numerical Analysis, Regression Analysis, Probability and Statistics, Multivariate Statistical Analysis, Game Theory, Operational Research, Stochastic Process, Time Series.
- *Honors:* Outstanding Graduate, National Scholarship.

TECHNICAL SKILLS

Python (numpy, scikit-learn, PyTorch), MATLAB, SQL, Hadoop, SPSS, R, CAD, Tableau, Excel

ACADEMIC PROJECTS

New York University   New York, NY
Inference of Important Causal Factors for Autoimmune Diseases   Oct 2021 – Present
- Preprocessing the sourse data (48k features) of gene sequencing at NYU Langone hospital.
- Using Random Forest Method and XGBoost to train model, compared the difference between the two methods.

Circle-shape Anchor Box for Object Detection   Oct 2021 – Jan 2022
- Replicated SSD (Single Shot MultiBox Detector) by Pytorch and changed the rectangle detection box to circle-shape, improved the performance in circle-shape objects, especially for overlapping objects.

The Comparison of different Machine Learning Methods on Iraqi Diabetic Data   Oct 2021 – Dec 2021
- Used Log-Regression, knn, SVM, LDA, Naive Bayes, and Random Forest to make predictions in testdataset for diabetic with hyperparameter optimization, got the best method (Random Forest: 99.9%) in Diabetic Dataset.
- Used Factor Analysis to reduce dimensions for visualizing the outcome of classification and classification functions.

Hubei University of Technology   Wuhan, China
Nickel Hunter Project   Sep 2016 – Jan 2019
- Recruited members and built the ODE system to describe and predict biological reaction of the transgenic bacteria in the fluorescent detection of the nickel ions in the untreated wastewater.
- Made 15 mins' presentation in Boston, obtained Silver Medal in iGEM.

A Machine Learning Net based on Public Block-chain   Jun 2018 – Mar 2019
- Designed a block-chain suitable for machine learning with the semi-centralized network, an incentive mechanism based on the performance of the model as cumulative workload to distribute model coins.

PUBLICATIONS

- Liu, Z., Peng, C., Chen, P., & Luo, Y. (2016). The Research of Feature Extraction Algorithm by Integrating T-Rank and Softmax Methods.
- Qi, S. H. E. N., Yang, L. I., & Chunli, P. E. N. G. (2016, December). Analysis and Prediction of Soft Foundation Settlement for Expressway Based on BP Neural Network. In 2016 International Conference on Architectural Engineering and Civil Engineering (pp. 274-277). Atlantis Press.

AWARDS

- 1st Prize (0.81%) in CUMCM (China Undergrad Math Contest in Modeling), 2016
- Meritorious Winner (E-cert) in MCM (Math Contest in Modeling, USA), 2016
- Silver Medal in iGEM (Int'l Genetically Engineered Machine competition), 2017
- Meritorious Winner (E-cert) in ICM (Interdisciplinary Contest in Modeling, USA), 2017