Hanbing Yang

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INTERESTS   Machine Learning, Statistical Data Mining, Financial Statistics, Bioinformatics

EDUCATION

Nankai University   **2010.9-2014.6(present)**
Bachelor of Science: Mathematics and Applied Mathematics
Major courses highlight：
Mathematical Analysis, Advanced Algebra, Abstract Algebra, Functional analysis, Operations Research, Statistics, Probability Theory, ODE, Financial Engineering, Investment ,Actuarial Mathematics, Financial Credit Risk, Bioinformatics, Data Structure, Database, C/C++, Fortran, Matlab, R
GPA: 3.4/4   **Ranking in major: 15/56**

RESEARCH

The Property of SVM Maximal-Margin Classifier in Banach Space   2013.6-2013.9
- Joint research and learning program with Prof. Zhang Jun from University of Michigan. The topic was mainly in Machine Learning
- Mainly in theoretical proof, centering on the generalization of SIP (semi-inner product) in Banach Space and development of optimization for Maximum-Margin in L^p Space by techniques of Functional Analysis.

Stock price prediction based on Time Series and Neural Network   2013.3-2013.5
- Homework research program, focus on the accuracy and efficiency of the artificial neural network.
- Function interpolation and approximation
  Prediction of trends in numerical data (mainly from NASDAQ, DOW)
  Prediction of movements in financial markets
- Wrote the code using Matlab

Measuring the banking systemic importance by Shapley method   2012.5-2013.2
- Joint research with Prof. Chen Dianfa from School Of Economics and other undergraduates from Nankai University.
- Searched data from internet, developed mathematical model by using Multivariate Statistics and Game Theory, conducted statistical analysis
- Programming in Matlab, and wrote research report.

Prediction of population structure by using Markov-Chain Model   2012.6-2012.8
- Theoretical proof of the rationality of using MC, calculated state- transition matrix, conducted usability test.
- Programming in R, wrote research report.

SKILLS	**Software:**

- **SAS**

  Basic Statistical analysis including ANOVA, parametric and non-parametric tests，regression, clustering analysis and so on.

- **WEKA**

  Clustering of DNA sequence.

- **MATLAB**

  Analysis of bioelectric signals

  Artificial Neural Network, PDE solving, Simulink, MC simulation, clustering.

- **ECLIPSE & ANDROID STUDIO(Windows & Linux)**

  Android application development, 5 apps, more than 40000 users.

Programming Languages:

- **C/C++**

  Implement algorithm, familiar with STL and API.

- **R**

  Basic statistical calculation, implement the Markov Chain Model, kernel density

- **Java**

  Android app development

- **Python**

  Implement k-NN, Decision Tree, FP-tree and so forth

EXPERIENCE	**Internship**

- **China Merchants Bank (Corporate Bank Department)**

  Work as an account manager assistant

  Responsibility: daily customer data, credit condition, deposit and loan condition statistics

AWARDS	**Scholarship for Excellent Students of Nankai University**　　　　**2012 and 2013 Oct.**

——The scholarship is for top 20% students every year.