

YIDONG ZHOU

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Education	UNIVERSITY OF SCIENCE AND TECHNOLOGY OF CHINA (USTC) Candidate for B.S. in Statistics Cum. GPA: 3.74/4.3 (87.96/100); Major GPA: 4.04/4.3 (92.14/100) <ul style="list-style-type: none">• Sept 2017 – Jun 2018 GPA: 3.94/4.3 (90.65/100)• 2016 Excellent Student Scholarship (top 10%)• 2018 Excellent Student Scholarship (top 10%)• Relevant Coursework: Bayesian Analysis (99), Regression Analysis (90), Complex Analysis (90), Real Analysis (87), Functional Analysis (86), Partial Differential Equations (86), Applied Stochastic Processes (95), Probability (86), Operations Research (97), Mathematical Statistics (92), Algebraic Structure (91), Applied Statistical Software (R & Python) (95), Data Structures and Database (C & SQL) (91), Computer Programming A (C programming language) (88), Introduce to Data Science (A+)	HEFEI, CHINA <i>Aug 2015 – Present</i>
Experience	INTERIM ANALYSES USING MULTIVARIATE REPEATED CONFIDENCE BANDS (MRCBs) Research Assistant, supervised by Professor Rui Wang, Harvard University <ul style="list-style-type: none">• Implemented multivariate repeated confidence bands which accommodate multivariate response and multiple treatment arms under three settings (repeated measures responses, recurrent events, survival data)• Derived the mean and covariance function of treatment difference and further proved the correctness of the result• Utilized resampling algorithm to approximate critical values and thus computed the border of confidence bands• Proposed an algorithm which can place confidence bands and confidence regions adaptively to visualize MRCBs• Completed research outline for next-phase work in extending MRCBs to a universal situation	CAMBRIDGE, MA <i>Sept 2018 – Present</i>
	R PACKAGE DEVELOPMENT FOR RTREE, STREE, AND MASAL MODEL Research Assistant, supervised by Professor Heping Zhang, Yale University <ul style="list-style-type: none">• Constructed the macs package with Rcpp, including package architecture and late-stage testing & refinement• Integrated C/C++ into R to implement Classification Trees (RTREE), Survival Analysis Trees (STREE) and Multivariate Adaptive Splines for Analysis of Longitudinal Data (MASAL) model• Programmed powerful functions in R, such as R interface function, <i>plot</i> function, <i>print</i> function, etc.• Proposed an adaptive tree drawing algorithm which can calculate coordinates by recursive computation according to node distribution, and then arrange the position of each node in the plot	NEW HAVEN, CT <i>Jun 2018 – Sept 2018</i>
	DATA ANALYSIS FOR INVENTORY MANAGEMENT Research Assistant, supervised by Professor Yugang Yu, University of Science and Technology of China <ul style="list-style-type: none">• Conducted case-driven survey of cross-border e-commerce to develop inventory management strategy• Performed substantial cleaning of in-situ data from a top Amazon seller and fitted data in R and Python• Used machine learning models to improve stock tracking accuracy, anticipate sales and customer traffic to forecast stock requirements	HEFEI, CHINA <i>Dec 2017 - May 2018</i>
	TEXT EMOTION ANALYSIS BASED ON THEME Research Assistant, Supervised by Professor Qi Liu, University of Science and Technology of China <ul style="list-style-type: none">• Preprocessed Taobao users' review data with the Chinese text segmentation package (jieba) in Python• Performed part-of-speech tagging, removed stop words and extracted text features based on the theme (price, express, etc.)• Adopted the K-Nearest Neighbors (KNN) algorithm to classify the texts	HEFEI, CHINA <i>Sept 2017 - Dec 2017</i>
Manuscripts in Preparation	Zhou, Y., Ma, M., Lu, Y., Ma, H., & Zhang, H. (2018+). "Recursive Partitioning Based Multivariate Adaptive Regression Models, Classification Trees, and Survival Trees: The macs Package for R".	
Teaching	COMPUTER PROGRAMMING A (C PROGRAMMING LANGUAGE) Teaching Assistant, University of Science and Technology of China <ul style="list-style-type: none">• Lectured over 90 UTSC students on Q&A sessions of <i>Computer Programming A</i> for four hours per week• Managed lab guidance, graded student assignments and exams	HEFEI, CHINA <i>Sept 2017 – Jan 2018</i>
Leadership	STUDENT UNION, MINISTER OF ACTIVITY Minister of Activity <ul style="list-style-type: none">• Led a team of 15 to draft policy memos, coordinated discussions, and finalize policy enactment• Led the development and launch of a performance assessment system to improve operational excellence• Chaired monthly meetings to collect feedback from student representatives to enhance the interaction between faculty and students	HEFEI, CHINA <i>Sept 2016 - Jun 2017</i>
	FRESHMEN SEMINAR Research Team Leader <ul style="list-style-type: none">• Summarized literature related to research topics, established a mathematical model about predicting global climate• Completed the essay and oral defense with teammates, got an A with the joint efforts of team members	HEFEI, CHINA <i>Sept 2015 - Jun 2016</i>
Skills	STATISTICS & COMPUTER <ul style="list-style-type: none">• Naive Bayesian Model, Decision Tree Model, Logistic Regression Model, Convolutional Neural Network, etc.• C/C++, R, Python, LaTeX, HTML, CSS, JavaScript, MATLAB, Microsoft Office, PS, AE ACTIVITIES <ul style="list-style-type: none">• CCF Big Data & Computing Intelligence Contest (top 10%)• National College Students Mathematical Modeling Competition (top 10%)• Big Data Modeling Contest (top 10%)• "Find the next madman" Competition (top 10%)	