Qingyao Sun

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EDUCATION

East China Normal University (ECNU), Shanghai, China   09/2016-06/2020
Major: Statistics   **CGPA**: 3.86/4.0   **Major GPA**: 3.96/4.0   **Major Ranking:** 1/71
Awards & Scholarhips: ECNU Special Talent Alumni Scholarship (5/1000+), 11/2019; National Scholarship (1/71), 09/2018; National Scholarship (2/137), 09/2017; SMBC Global Foundation Scholarship (1/137), 09/2017

University of California-Berkeley (UCB), CA, USA   08/2018-12/2018
Berkeley International Study Program   **GPA**: 4.0/4.0

ACADEMIC EXPERIENCE

Behavior Analysis from Images and Videos, University of Alberta, Canada   01/2020-04/2020
- Conducted an extensive literature review on pose transfer and reproduced previous works
- Implementing cutting-edge pose transfer algorithm with PyTorch

Indeterministic Variants of Two Problems of Information Theory, ECNU, China   12/2019-Present
- Identified a close relation between answers to two open problems proposed by Erdős et al.
- Conducting numerical simulation with the Z3 theorem prover

Extension to the MDI-oob Feature Importance Measure, ECNU, China   10/2019-Present
- Investigated the performance of a linear model on top of ensemble learning methods
- Extended the MDI-oob criterion to XGBoost, and distinctly improved the accuracy of noisy feature identification

Teaching Assistant for Advanced Algebra, ECNU, China   09/2019-Present
- Graded students' assignment biweekly and vountarily participated in regular online Q&A sessions

Enhancement for Iterative Ramdon Forest (iRF) Cont'd, ECNU, China   09/2019-10/2019
- Created the R package `tree.interpreter` with Rcpp, implementing the MDI-oob algorithm, and published it on CRAN
- Incorperated MDI-oob into the iRF package with `tree.interpreter`, resulting in higher resistence to noisy features

Enhancement for Iterative Ramdon Forest (iRF), LBNL, USA   07/2019-08/2019
- Documented the iRF algorithm, which has evolved quite a lot since the publication of the original paper, in great detail
- Halved the running time of the iRF package with various optimization techniques
- Fixed various bugs, including a race condition, granting reproducibility to the iRF package
- Added unit tests, improved code structure and documentation in general, and flagged potential issues for future review

Variance of Average Depth of the 1-2 Branching Process, ECNU, China   03/2019-05/2019
- Conducted simulation study with R and C++ on Alibaba Cloud, guiding theoretical analysis
- Proposed and utilized a niche pseudorandom number generator for the binomial distribution

Developer, Code Review Functionality to OKPY, UCB, USA   11/2018
- Established an extension to okpy.org, the course platform of a CS course at UC Berkeley, allowing students to perform code review for each other and make suggestions after an assignment is due

Leader & Developer, *Kernod*, Community-powered Q&A Site, Shanghai, China   03 /2018-03/2019
- Established Kernod, A vertical Q&A community for science and engineering majors
- Developed and maintained the Kernod website based on the cloud application platform of Heroku

COMPETITIONS

First Place Winner in the CS 61B Amazons AI Tournament (1/172)   12/2018
Second Place Winner in the CS 61A Scheme Art Contest (2/38)   12/2018
Meritorious Winner in Mathematical Contest In Modeling (top 10%)   04/2018

ADDITIONALS

Tech Stack: Python, R, C/C++, MATLAB, Java, SQL, Linux/Unix, Assembly (x86_64 and RISC-V), and Verilog
GitHub Profile: https://github.com/nalzok   **Stack Overflow Profile:** https://stackoverflow.com/users/5399734
Voluntary Activities: Stray Animal Caretaking Volunteer, 09/2019-Present; Shanghai Natural History Museum Volunteer, 09/2017; Huadong Hospital Affiliated to Fudan University Volunteer, 07/2016
Personal Interests: Electronics, particularly FPGA; Photography; Roguelike games