DONGRUI SHEN

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I am currently a graduate with the master's degree in computational applied mathematics from the University of Edinburgh, UK, seeking a PhD research position in computational statistics.

EDUCATION

University of Edinburgh, UK *Sep 2020 - Aug 2021*
MSc - Computational Applied Mathematics *With Distinction*

Beihang University (BUAA), China *Sep 2016 - June 2020*
BSc - Mathematics and Applied Mathematics *GPA: 3.76/4*

WORK EXPERIENCE

NetEase Youdao, Hangzhou *Mar 2021 - June 2021*
Python data science teaching assistant
- Assist in the development of lecture slides and computer lab materials.

TECHNICAL SKILLS

Programming: Python,R,C
Software & Tools: Matlab,Maple,LaTeX

PROJECTS/TRAINING

Expectation propagation in linear regression models *Sep 2021 -*
Variational inference
- Research training. Learn the basics of variational methods, including VB (MFVB and FFVB) and EP (parallel EP, AEP, SEP and α-EP) methods. Compare different variational methods in linear regression model. Explore the algorithm design with different problem-specific convariance constraints.

Modeling soccer scores by integrated nested Laplace approximation *Feb 2021 - Aug 2021*
Bayesian data analysis
- Master dissertation. Explore the basic ideas of INLA, and implement several models of increasing complexity for predicting the outcomes of soccer matches.

Regression models in JAGS *Nov 2020 - Dec 2020*
R programming
- Course project. Compare three Bayesian models by implementing the models in JAGS, having JAGS sample from the corresponding posterior densities, and then using the deviance information criterion, DIC, for model comparison.

Bernstein type problem for minimal hypersurfaces *Feb 2020 - May 2020*
Differential geometry
- Undergraduate dissertation. Introduce the value distribution problem of Gauss map of minimal surfaces in Euclidean space and present major contributions by Osserman,Xavier and Fujimoto.

Pagerank on the high-speed rail network in China *May 2019 - Jun 2019*
Stochastic process
- Course project. Analyze the high-speed rail network using PageRank algorithm and graph theory methods.

AWARD

- Top 500 of 2020 Alibaba Global Mathematics Competition *Mar 2020*
- Scholarship for Outstanding Performance for the 2018 - 2019 academic year, BUAA *Oct 2019*
- Scholarship for Outstanding Performance for the 2017 - 2018 academic year, BUAA *Oct 2018*
- The Mertit Student of Beihang University for the 2017 - 2018 academic year, BUAA *Oct 2018*