My research stay at the Bioinformatics Center, Institute for Chemical Research, Kyoto University
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This summer I was given the truly incredible opportunity of being able to participate in the young researchers exchange program at Kyoto University's Bioinformatics Center within the Institute for Chemical Research. For three months, I worked alongside a stellar collection of both Japanese and international researchers in Professor Mamitsuka's laboratory, and received helpful insight and advice on my research project related to a genome-wide association study (GWAS) through weekly group progress meetings with all lab members as well as biweekly individual meetings with Professor Mamitsuka and Professor Hancock. Their comments, coming from a biological and machine learning perspective, were especially helpful as a way for me to supplement my knowledge of Bayesian statistics and gain a deeper understanding of the difference between the mechanics of my model and other popular machine learning techniques used to overcome the "curse of dimensionality" present in GWAS data sets.

In this way, on top of using the lab's computational resources to fit my model to data sets of various complexities, I utilized the insights of the fellow researchers in the lab to interpret the subsequent results and suggest further refinements to the joint probability distribution specified in my model. In late June, I presented my research as a poster at the International Society for Bayesian Analysis conference in Kyoto and received additional feedback from an international community of Bayesian statisticians. Finally, as recommended by Professor Mamitsuka and Professor Hancock, I carried out a formal comparative analysis to clearly show the difference between the performance of my model and other regularization techniques applied to the coefficients in a "large p, small n" regression problem such as the Lasso, Ridge, Elastic Net, and Group Lasso regression procedures. This analysis will soon prove to be very useful as I prepare to submit a paper detailing my research to the Genetic Analysis Workshop in the United States this fall.

During my spare time in Kyoto, I ventured out to many temples and shrines, tried many delicious foods such as *takoyaki*, *okonomiyaki*, and *matcha ice cream*, and even experienced the famous *Gion-matsuri* festival. Throughout my stay, I also had opportunities to travel to Okayama, Osaka, Tokyo, Sapporo and Nagoya to do more sight-seeing and further experience Japanese culture. Although it was a short three months, I made many unforgettable memories in Japan this summer and began many relationships that I look forward to cultivating in the future. I believe that inside the laboratory I gained invaluable experience as a young researcher, and that outside the laboratory I gained the same as a person with an interest in the Japanese language and culture. From the bottom of my heart, I thank the ICR for allowing me to experience such important growth in my life.