

Machine learning for personalized genomics

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Abstract: The development of DNA sequencing technologies allow us to collect large amounts of molecular data about the genome of each individual, and opens the possibility to predict drug response or evaluate the risk of various diseases from one's molecular identity. In this talk I will discuss some regularization-based approaches we have developed to estimate complex, high-dimensional predictive models from relatively few samples, in particular in cancer prognosis and toxicogenetics.