YING JI

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EDUCATION

Vanderbilt University, Nashville, TN   2015/08 - Present
Ph.D. in Human Genetics   GPA: 3.82
M.S. in Biostatistics
Coursework: Advanced Statistical Computing; Applied Survival Analysis; Modern Regression Analysis;
Contemporary Statistical Inference; Fundamentals of Probability; High Performance Computing
Tsinghua University, Beijing, China   2011/09 - 2015/07
B.S. in Biological Science

EXPERIENCE

Risk gene prediction using machine learning methods

- Leveraged large scale gene expression profiles (including dense and sparse data) as features, built random forest models to characterize risk genes, predicted more than 1000 high risk genes (python, scikit-learn)

- Quantified disease risk of genes by integrating multi-omics information (including categorical and continuous) data using a Bayesian framework

- Unveiled spatiotemporal heterogeneity of risk genes by clustering techniques (PCA, t-SNE)

Predict genetic risk for breast cancer in East Asian population

- Developed pipeline to predict genetic risk in East Asian by leveraging European sample results and conducted meta-analysis using R, increased prediction auROC from 0.56 to 0.62

- Mentored rotation graduate student on using Linux/unix and implementing models on computer clusters

PROJECTS

Predict patient readmission from high dimensional hospitalization Data

- Conducted feature engineering of sparse, messy hospital billing data (10,000 subjects)

- Achieved 70% accuracy (cross validation) to predict readmission within 30 days of discharge through implementing different models (logistic regression, support vector machine, and random forest)

ACTIVITIES

Secretary of Human Genetics Graduate Student Association   2017/08-2018/08

· Took minutes at every meeting and maintained communication between participants.

PRESENTATIONS/ AWARDS

2019 Graduate Leadership Development Institute (GLDI) travel award   2019/05

Travel support for JSM (joint statistics meeting) 2019

2018 American Society of Human Genetics Oral Presentation   2018/10

Abstract scored in top 8% among more than 3000 participants