

# Michael Seo

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CONTACT INFORMATION	Personal Website: <a href="https://mikejseo.github.io">mikejseo.github.io</a>	Email: <a href="mailto:swj8874[at]gmail.com">swj8874[at]gmail.com</a>
RESEARCH INTERESTS	Bayesian methods; (network) meta-analysis; machine learning; causal inference	
EDUCATION	Ph.D. Biostatistics and Epidemiology, University of Bern, 2019-2022 M.S. Statistics, Stanford University (GPA: 3.7), 2012-2014 B.S. Statistics, Graduation with High Distinction, Duke University (GPA: 3.7), 2007-2011	
EMPLOYMENT	<b>Ph.D. Student in Biostatistics and Epidemiology</b> , Institute of Social and Preventive Medicine, University of Bern, Switzerland, 2019-Present <b>Biostatistician</b> , LLX Solutions, Boston, 2018-2019 <b>Ph.D. Student in Biostatistics</b> , Center for Evidence Synthesis in Health, Brown University, 2015-2018 <b>Quantitative Analyst</b> , In4mation Insights, Boston, 2015 Summer <b>Research Assistant</b> , Department of Statistics, Stanford University, 2014-2015 <b>Research Assistant</b> , Children's Environmental Health Initiative, Duke University, 2011-2012	
PUBLICATIONS	Efthimiou O, Hoogland J, Debray TPA, <b>Seo M</b> , Furukawa TA, Egger M, White IR (Submitted). Measuring the performance of prediction models to personalize treatment choice.  Yoshida K, <b>Seo M</b> , Yan L, Sahker E, Cipriani A, Leucht S, Iwatsubo T, Efthimiou O, Furukawa TA (Submitted). Personalized prediction of Alzheimer's disease and its treatment effects by donepezil: an individual participant data meta-analysis of eight randomized controlled trials.  <b>Seo M</b> , Furukawa TA, Karyotaki E, Efthimiou O (Submitted). Developing prediction models when there are systematically missing predictors in individual patient data meta-analysis.  <b>Seo M</b> , Debray TPA, Ruffieux Y, Gsteiger S, Bujkiewicz S, Finckh A, Egger M, Efthimiou O (2022). Combining individual patient data from randomized and non-randomized studies to predict real-world effectiveness of interventions. <i>Statistical Methods in Medical Research</i> , To appear.  Efthimiou O, <b>Seo M</b> , Karyotaki E, Cuijpers P, Furukawa TA, Schwarzer G, Rücker G, Mavridis D (2022). Bayesian models for aggregate and individual patient data component network meta-analysis. <i>Statistics in Medicine</i> , To appear.  <b>Seo M</b> , White IR, Furukawa TA, Imai H, Valgimigli M, Egger M, Zwahlen M, Efthimiou O (2021). Comparing methods for estimating patient-specific treatment effects in individual patient data meta-analysis. <i>Statistics in Medicine</i> , 40, 1553-1573.  <b>Seo M</b> , Furukawa TA, Veroniki AA, Pillinger T, Tomlinson A, Salanti G, Cipriani A, Efthimiou O (2021). The Kilim plot: A tool for visualizing network meta-analysis results for multiple outcomes. <i>Research Synthesis Methods</i> , 12, 86-95.  Furukawa TA, Debray T, Akechi T, Yamada M, Kato T, <b>Seo M</b> , Efthimiou O (2020). Can personalized treatment prediction improve the outcomes, compared with the group average approach, in a randomized trial? Developing and validating a multivariable prediction model in a pragmatic megatrial of acute treatment for major depression. <i>Journal of Affective Disorders</i> , 274, 690-697.  Khan MS, Khan AR, Khan AI, <b>Seo M</b> , Yasmin F, Usman MS, Moustafa A, Schmid CH, Kalra A, Ikram S (2020). Comparison of revascularization strategies in patients with acute coronary syndrome and multivessel coronary disease: A systematic review and network meta-analysis. <i>Catheterization and cardiovascular interventions</i> , 96, E447-E454.	

R PACKAGES	<p><b>Michael Seo</b> (2022). bipd: Bayesian Individual Patient Data Meta-Analysis using 'JAGS'. R package version 0.1. <a href="https://CRAN.R-project.org/package=bipd">https://CRAN.R-project.org/package=bipd</a>.</p> <p><b>Michael Seo</b> and Christopher Schmid (2020). bnma: Bayesian Network Meta-Analysis using 'JAGS'. R package version 1.5.0. <a href="https://CRAN.R-project.org/package=bnma">https://CRAN.R-project.org/package=bnma</a>.</p> <p>Robert Tibshirani, <b>Michael Seo</b>, Gil Chu, Balasubramanian Narasimhan and Jun Li (2018). samr: Significance Analysis of Microarrays. R package version 3.0. <a href="https://CRAN.R-project.org/package=samr">https://CRAN.R-project.org/package=samr</a>.</p>
CONTRIBUTED PRESENTATIONS	<p>Developing prediction models when there are systematically missing predictors in an individual patient data meta-analysis. Joint Statistical Meeting (JSM), Seattle; August, 2021.</p> <p>bnma: Bayesian Network Meta-Analysis using 'JAGS'. Evidence Synthesis and Meta-Analysis in R Conference; January, 2021.</p> <p>Predicting real world effectiveness of interventions, combining individual patient data from multiple randomized and non-randomized studies. 41<sup>st</sup> Annual Conference of the International Society for Clinical Biostatistics (ISCB), Krakow; August, 2020.</p> <p>The Kilim plot: a tool for visualizing network meta-analysis results for multiple outcomes (poster). 41<sup>st</sup> Annual Conference of the International Society for Clinical Biostatistics (ISCB), Krakow; August, 2020.</p> <p>Comparing methods for variable selection in individual patient data meta-analysis. XXXIst Conference of the Austro-Swiss Region (ROeS) of the International Biometric Society, Lausanne; September, 2019.</p>
TEACHING ASSISTANTSHIP	<p>Applied Logistic Regression, University of Bern, 2021</p> <p>Prognostic Research: from Basics to Modelling, University of Bern, 2020, 2021</p> <p>Evidence Synthesis Methods, University of Bern, 2019</p> <p>Applied Regression Analysis (PHP 2511), Brown, Spring 2016</p> <p>Fundamentals of Probability and Statistical Inference (PHP 2515), Brown, Fall 2015</p> <p>Probability and Statistics Inference (STAT 103), Duke, Spring 2011</p> <p>Statistics (STAT 114), Duke, Fall 2010</p> <p>Probability and Statistics for Engineers (STAT 113), Duke, Spring 2010</p> <p>Probability (STAT 104), Duke, Fall 2009</p>
PROGRAMMING	R, Python, SAS, SQL, C++, Java, LaTeX
LANGUAGES	Korean, English