KYLE W. SINGLETON

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SUMMARY

Biomedical Engineering PhD with focus in medical informatics and disease modeling. Experience working with engineering, statistics, and clinical personnel to implement and deploy software in clinical trials research. Proficient at data cleaning and statistical modelling with R. Previous experience with additional statistics packages such as MATLAB and SPSS.

EDUCATION

University of California, Los Angeles Los Angeles, CA
Doctor of Philosophy, Biomedical Engineering July 2016
Dissertation: Investigating Predictive Disease Model Transportability through Cohort Simulation and Causal Analysis
Advisors: Alex A.T. Bui and William Hsu

University of Virginia Charlottesville, VA
Bachelor of Science, Biomedical Engineering May 2006
Minor: Computer Science

PROFESSIONAL EXPERIENCE

Graduate Student Researcher 2012 - 2016
UCLA Medical Imaging Informatics, Los Angeles, CA

- Supervised graduate student team, reviewing and cleaning 500+ brain cancer cases for predictive modelling.
- Evaluated a novel simulation technique for interpreting the external validity of models between patient cohorts.
- Processed cancer data from public repositories (National Lung Screening Trial, The Cancer Genome Atlas).

National Library of Medicine Fellow 2008 - 2012
UCLA NLM Medical Imaging Informatics Training Program, Los Angeles, CA

- Programmed and supported a tablet based system used to survey 20,000+ patients in three Los Angeles clinics.
- Completed coursework in medical informatics, statistics, and machine learning.

Post-baccalaureate Fellow 2006 - 2008
National Institutes of Health, Bethesda, MD
Section on Stroke Diagnostics and Therapeutics, NINDS

- Designed new imaging workflow, accelerating image availability for stroke research tasks.
- Developed a 100 patient case MRI stroke atlas.

Undergraduate Researcher 2005 - 2006
Computational Systems Biology Lab, Charlottesville VA

- Collaborated with two students to create metabolic network reconstruction of Leishmania major.

SKILLS

Programming Languages: R, Java, C#, ASP.NET, MATLAB, C++
Informatics Tools: R, SPSS, MATLAB, RapidMiner, Weka, GENIE
Medical Data Standards: DICOM, XML, HIPAA

SELECTED PUBLICATIONS (2 OF 6)

Singleton KW, Speier W, Bui AAT, Hsu W. Motivating the additional use of external validity: examining transportability in a model of glioblastoma multiforme. AMIA Annu Symp Proc. 2014;2014:1930–9.

Singleton KW, Bui AAT, Hsu W. Transfer and transport: incorporating causal methods for improving predictive models. J Am Med Inform Assoc 2014;:amiajnl–2014–002968. doi:10.1136/amiajnl-2014-002968