

NICHOLAS J. MATIASZ

NICHOLASMATIASZ@GMAIL.COM

PROFESSIONAL SUMMARY

Engineering generalist with formal training in both informatics and electrical engineering. Ten years of experience related to data analysis, technical research, and web development. Doctoral-level skills in communication, causal reasoning, and system modeling.

EDUCATION

UCLA 2013–18

- Ph.D., Bioengineering (Medical Informatics); GPA: 3.81
- M.S., Bioengineering (Medical Informatics); GPA: 3.81

Tufts University 2006–12

- M.S., Electrical Engineering; GPA: 3.60
- B.S. *cum laude*, Electrical Engineering; GPA: 3.37

EXPERIENCE

City of Los Angeles 2018–now

Senior Project Manager — Mayor's Innovation Team

- Research problems in the city to determine their causes
- Design, implement, and manage initiatives to address problems in the city
- Collaborate with city departments to advance mayoral priorities

UCLA 2013–18

Graduate Student Researcher — Medical Informatics

- Developed data-processing pipeline for causal reasoning and experiment planning
- Developed ResearchMaps.org, a web app for integrating and planning experiments
- Co-authored nine research manuscripts, four conference posters, three funding proposals
- Managed term projects for courses on medical knowledge representation

Massachusetts General Hospital 2012–13

Research Technician — Neurology

- Developed computing infrastructure and data analysis software
- Designed and built electrode instrumentation for neuroscience research
- Managed procurement of over \$0.5M in scientific equipment

EXPERIENCE (CONT.)**Tufts University**

2009–12

Research Assistant — Electrical Engineering, Computer Science, & Psychology

- Developed seizure-prediction algorithm based on EEG analysis
- Designed novel interface and intonation feature for electrolarynx devices
- Collected and analyzed EEG and MRI data from human participants
- Served as project sponsor for undergraduates' senior design project

Cavanaugh Tocci Associates

Summer 2010

Acoustical Consulting Intern — Sound System Group

- Created functional block diagrams for architectural drawings
- Obtained on-site acoustical measurements and analyzed data

Allied Restoration Corp.

Summers 2007–09

AutoCAD Intern — Project Management Office

- Designed field drawings and architectural details for roofing projects using AutoCAD
- Revised construction documents in accordance with updated specifications
- Organized and maintained project files and paperwork

SKILLS*Research*

- causal modeling and reasoning, data analysis and visualization

Communication

- writing, presentations, typography (*web & print*), copyediting

Software

- JavaScript, HTML, CSS, Python, Java, Neo4j, MySQL, Git, AutoCAD, InDesign

PUBLICATIONS

- N. J. Matiasz, J. Wood, A. J. Silva (2018). Quantifying the convergence of evidence. In submission.
- N. J. Matiasz*, J. Wood*, W. Wang, A. J. Silva, W. Hsu (2018). Experiment selection in meta-analytic piecemeal causal discovery. In submission.
- J. Wood, N. J. Matiasz, A. J. Silva, A. Abyzov, W. Wang (2018). OpBerg: Discovering causal sentences using optimal alignments. In submission.
- N. J. Matiasz (2018). *Planning Experiments with Causal Graphs* (Ph.D. thesis). UCLA.

PUBLICATIONS (CONT.)

- N. J. Matiasz*, J. Wood*, P. Doshi*, W. Speier, B. Beckemeyer, W. Wang, W. Hsu, A. J. Silva (2018). ResearchMaps.org for integrating and planning research. In *PLOS One* 13:e0195271.
- J. I. Garcia-Gathright, N. J. Matiasz, C. Adame, K. V. Sarma, L. Sauer, N. F. Smedley, M. L. Spiegel, J. Strunck, E. B. Garon, R. K. Taira, D. R. Aberle, A. A. T. Bui (2018). Evaluating Casama: Contextualized semantic maps for summarization of lung cancer studies. In *Computers in Biology and Medicine* 92:55–63.
- N. J. Matiasz, J. Wood, W. Wang, A. J. Silva, W. Hsu (2017). Translating literature into causal graphs: Toward automated experiment selection. In *Proceedings of the IEEE International Conference on Bioinformatics and Biomedicine (IEEE BIBM)*.
- N. J. Matiasz, J. Wood, W. Wang, A. J. Silva, W. Hsu (2017). Computer-aided experiment planning toward causal discovery in neuroscience. In *Frontiers in Neuroinformatics* 11:12.
- J. I. Garcia-Gathright, N. J. Matiasz, E. B. Garon, D. R. Aberle, R. K. Taira, A. A. T. Bui (2016). Toward patient-tailored summarization of lung cancer literature. In *Proceedings of the IEEE International Conference on Biomedical and Health Informatics (IEEE BHI)*.

CONFERENCE POSTERS

- N. J. Matiasz, W. Chen, A. J. Silva, W. Hsu (2016). MedicineMaps: a tool for mapping and linking evidence from experimental and clinical trial literature. Presented at *40th Annual Symposium of the American Medical Informatics Association (AMIA)*.
- N. J. Matiasz, J. Wood, W. Hsu, A. J. Silva (2016). ResearchMaps.org: A free web app for integrating and planning experiments. Presented at *15th Annual Molecular and Cellular Cognition Society (MCCS) Symposium*.
- N. J. Matiasz, A. J. Silva, W. Hsu (2015). Synthesizing clinical trials for evidence-based medicine: A representation of empirical and hypothetical causal relations. Presented at *6th Annual Joint Summits on Translational Science: AMIA Summit on Clinical Research Informatics*.
- N. J. Matiasz, W. Hsu, A. J. Silva (2014). ResearchMaps.org, a free web application to track causal information in biology. Presented at *13th Annual Molecular and Cellular Cognition Society (MCCS) Symposium*.

PRESENTATIONS

- Translating literature into causal graphs: Toward automated experiment selection (16 November 2017). *IEEE International Conference on Bioinformatics and Biomedicine (IEEE BIBM)*.
- ResearchMaps.org for integrating evidence (27 October 2017). *UCLA ICLM Young Investigator Lecture Series*.

PRESENTATIONS (CONT.)

- Building the brain of a robot scientist (4 May 2017). *UCLA Career Development Conference*.
- ResearchMaps.org: Planning experiments by quantifying and visualizing empirical evidence and hypothetical assertions (28 April 2017). *2nd QCBio Symposium: Exploring the Frontiers of Biomedical Big Data*.
- Building the brain of a robot scientist (25 April 2017). *UCLA Grad Slam Finals*.

AWARDS & FUNDING

- UCLA Dissertation Year Fellowship (2017–18)
- UCLA Department of Bioengineering Supplemental Fellowship (2017)
- NIH/NCATS UCLA CTSI Pathfinder Award (UL1TR000124, 2016)
- NIH Medical Imaging Informatics Training Program (T32 EB016640, 2014–16)
- UCLA Graduate Division University Fellowship (2013–14)
- UCLA Graduate Division Registration Fee Grant (2013–14)
- IEEE Eta Kappa Nu (HKN) Epsilon Delta Chapter Member (2010)
- Tufts University Dean's Grant for Senior Design Project (2009)
- Raymond F. Gates Jr. Memorial Scholarship (2006, 2007, 2008, 2009)
- Computer Science, Engineering, & Math Scholars (CSEMS) Scholarship (2006–08)
- Tufts University Loudspeaker Design Contest: First Place (2007)