Ian Connick Covert

Curriculum Vitae

Paul G. Allen School of Computer Science & Engineering
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Education

University of Washington, Seattle, WA
Ph.D. in Computer Science, Expected 2022
Advisor: Su-In Lee

Columbia University, New York, NY
B.A. in Math/Statistics, B.A. in Computer Science, May 2017
Summa Cum Laude, Phi Beta Kappa, GPA 4.00/4.33

French American International High School, San Francisco, CA
International Baccalaureate Diploma (Bilingual in French), June 2013
GPA: 4.15/4.25

Employment and Research Experience

Research Assistant, AIMS Lab, University of Washington — January 2019-Present
Advisor: Su-In Lee
Feature selection and feature importance for deep learning models, in collaboration with Allen Institute for Brain Science.

Student Researcher, Google AI Healthcare — September 2018-March 2019
Manager: Ming Jack Po, Jiening Zhan
Topologically-aware deep learning models for detecting seizures from EEG.

Research Intern, Google AI Healthcare — June 2018-September 2018
Manager: Ming Jack Po, Jiening Zhan
Interpretability methods for deep learning EEG seizure detection models.

Research Assistant, MODE Lab, University of Washington September 2017-December 2018
Advisor: Emily Fox
Nonlinear Granger causality discovery with neural networks.

Investment Banking Strategist Summer Analyst, Goldman Sachs June 2016-August 2016
Manager: Ketan Vyas, Joey Allcock.
Interest rate derivatives credit risk pricing, data-driven share allocation for equity issuances.

Undergraduate Research Assistant, Columbia University February 2016-May 2017
Advisor: Liam Paninski
Neuronal structure discovery from calcium imaging video.

Investment Banking Summer Analyst, Société Générale June 2015-August 2015
Manager: Barry Cohen
Interest rates derivatives pricing, swap market volatility research.

AWARDS

Upton Fellowship, Princeton University, 2017
(Did not attend)

Computer Science Excellence Fellowship, University of Illinois at Urbana-Champaign, 2017
(Did not attend)

Computer Science Faculty First Year Fellowship, University of Massachusetts Amherst, 2017
(Did not attend)

Summa Cum Laude, Columbia University, 2017

Phi Beta Kappa, Columbia University, 2017

Computer Science Award for Academic Excellence, Columbia University, 2017

Publications and Preprints

Ian Covert, Uygar Sümbül, Su-In Lee. "Deep Unsupervised Feature Selection." Under Review for Proceedings of International Conference on Learning Representations (ICLR) 2020.

Ian Covert, Scott Lundberg, Su-In Lee. "Shapley Feature Utility." Under Review for Machine Learning in Computational Biology (MLCB) Workshop 2019.

Ian Covert, Uygar Sümbül, Su-In Lee. "Principal Genes Selection." Under Review for Machine Learning in Computational Biology (MLCB) Workshop 2019.

Alex Tank*, Ian Covert*, Nicholas Foti, Ali Shojaie, Emily Fox. "Neural Granger Causality for Nonlinear Time Series." Under Review for Transactions on Pattern Analysis and Machine Intelligence (TPAMI). (*Authors contributed equally to the work.)

Ian Covert, Balu Krishnan, Imad Njam, Jiening Zhan, Matthew Shore, John Hixson, Ming Jack Po. "Temporal Graph Convolutional Networks for Automatic Seizure Detection." Proceedings of Machine Learning for Healthcare (MLHC) 2019.

Jiening Zhan, Hector Yee, Ian Covert, Jiang Wu, Albee Ling, Matthew Shore, Eric Teasley, Rebecca Davies, Tiffany Kung, Justin Tansuwan, John Hixson and Ming Jack Po. "EEG Seizure Detection via Deep Neural Networks: Application and Interpretation." Neural Information Processing Systems (NeurIPS) Machine Learning for Health (ML4H) Workshop 2018.

Alex Tank, Ian Covert, Nicholas Foti, Ali Shojaie, Emily Fox. "An Interpretable and Sparse Neural Network Model for Nonlinear Granger Causality Discovery." Neural Information Processing Systems (NeurIPS) Time Series Workshop 2017.

Conference Reviewing

Machine Learning in Computational Biology (MLCB) 2019

Neural Information Processing Systems (NeurIPS) 2019

Neural Information Processing Systems (NeurIPS) 2018

Teaching

Teaching assistant, Convex Optimization (EE578), University of Washington — Winter 2019
Professor: Maryam Fazel
Taught lectures, taught biweekly review sessions, wrote exam questions, graded homework.

Instructor, Code IHS, French American International High School — Winter 2017
Instructors: Ian Covert, Sumner Hearth, Pierre-Alexander Low
Designed and taught a two-week computer science course for high school students.

Service and Volunteering

Computer Science Ph.D. Mentoring, University of Washington, 2018-2019

Visit Days Coordination, University of Washington, 2018

Computer Science Undergraduate Mentoring, Columbia University, 2016-2017