Samuel Sledzieski

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EDUCATION

Massachusetts Institute of Technology — **Cambridge, MA**

PhD, Electrical Engineering and Computer Science — 2019 – 2024
- In Progress
- Concentration: Computational biology, machine learning, protein networks, protein structure
- Advisor: Dr. Bonnie Berger

SM, Electrical Engineering and Computer Science — 2019 – 2021

University of Connecticut — **Storrs, CT**

BS, Computer Science — 2015 – 2019
- Minor in Molecular and Cellular Biology
- Concentration: Bioinformatics, Data Science
- Advisor: Dr. Mukul Bansal
- Magna Cum Laude, Honors Scholar

RESEARCH

Massachusetts Institute of Technology — **Cambridge, MA**

Research Assistant, Computation and Biology Group — Feb 2020 – Present

Cellarity — **Cambridge, MA**

Machine Learning Intern, Perturbation Biology Group — May 2021 – Aug 2021

MIT Lincoln Laboratory — **Lexington, MA**

Summer Research Program, Advanced Lasercom Systems Group — May 2019 – Aug 2019

University of Connecticut — **Storrs, CT**

Undergraduate Research Assistant, Computational Biology Lab — Jan 2017 – May 2019

Software Developer, Jackson Laboratory for Genomic Medicine — Aug 2018 – May 2019

Undergraduate Research Assistant, Nelson Lab — Oct 2015 – Dec 2016

TEACHING

Massachusetts Institute of Technology — **Cambridge, MA**

Teaching Assistant, Machine Learning in Genomics (6.878) — Fall 2021

Teaching Assistant, Intro to Deep Learning (6.S191) — Winter 2021, 2022

University of Connecticut — **Storrs, CT**

Teaching Assistant, Theory of Computation — Spring 2018

PUBLICATIONS

[5] Kousi, Boix, Park, Mathys, **Sledzieski**, Peng, Bennett, Tsai, Kellis, "Single-cell mosaicism analysis reveals cell-type-specific somatic mutational burden in Alzheimer's Dementia," *bioRxiv*. posted 22 April 2022, 10.1101/2022.04.21.489103

[4] Zaman*, **Sledzieski***, Wu, Bansal, "virDTL: Viral recombination analysis through phylogenetic reconciliation and its application to sarbecoviruses and SARS-CoV-2," Under Review.

[3] **Sledzieski***, Singh*, Cowen, Berger, "Genome-scale interactome prediction with a sequence-based, structure-aware, interpretable model," *Cell Systems* 12.10 (2021): 969-982.

[2] **Sledzieski***, Singh*, Cowen, Berger, "Sequence-based prediction of protein-protein interactions: a structure-aware interpretable deep learning model," *Conference on Research in Computational Molecular Biology* (RECOMB) 2021.

[1] **Sledzieski**, Zhang, Mandoiu, Bansal, "TreeFix-TP: Phylogenetic Error Correction for Accurate Reconstruction of Viral Transmission Networks," *Pacific Symposium on Biocomputing* (PSB) 2021: Proceedings, pages 119-130.

PRESENTATIONS

Machine Learning in Structural Biology (MLSB) Workshop at NeurIPS 2021 — Dec 2021

Research on Computational Molecular Biology (RECOMB) 2021 Proceedings Talk — Sep 2021

	Cold Spring Harbor Laboratory 2021 Meeting on Network Biology	Mar 2021
	PSB 2021 - Biocomputing and AI for infectious disease modelling and therapeutics	Jan 2021
	RECOMB 2019 Poster Presentation	Apr 2019
	IEEE ICCABS Workshop on Computational Advances for Next Generation Sequencing	Oct 2018
	UConn Fall Frontiers in Undergraduate Research	Oct 2018
	University of Connecticut Bioinformatics Seminar	Mar 2018, Oct 2018

GRANTS & FELLOWSHIPS

National Science Foundation (NSF) Graduate Research Fellowship	2021 - 2024

AWARDS

First Place, MIT Intro to Deep Learning Final Project Competition	2020
Dean’s List, College of Liberal Arts and Sciences, School of Engineering	2015 – 2019
Academic Excellence Scholarship, University of Connecticut	2015 – 2019
New England Scholar, University of Connecticut	2017 – 2019
Third Place Machine Learning, United Health Group Global Hackathon	2017
Third Place Overall, HampHack	2017
Third Place Overall, HackUConn	2017
National Merit Scholarship Finalist	2014

MEMBERSHIPS & ACTIVITIES

International Society for Computational Biology (ISCB)
Institute of Electronics Engineers (IEEE)
Association for Computing Machinery (ACM)
Tau Beta Pi, Engineering Honor Society (TBΠ)
Eta Kappa Nu (IEEE-HKN)
Upsilon Pi Epsilon, Computer Science Honor Society (UPE)

SELECTED COURSEWORK

- **Computer Science**
  - Algorithms
  - Artificial Intelligence
  - Advanced Computational Biology
  - Computational Geometry
  - Inference and Information
  - Machine Learning
  - Software Engineering
- **Math and Statistics**
  - Calculus I & II, Multivariable Calculus
  - Statistical Methods
  - Linear Algebra
  - Optimization Methods
- **Biology**
  - Biochemistry
  - Cell Biology
  - Genetics
  - Molecular Evolution
  - Phylogenetics

[*CV compiled on 2022-04-23*]