

Curriculum Vitae

Andrew Gritsevskiy

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Citizenship: United States

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Education

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| 2019 - 2022 (expected) | University of Toronto
Computer science specialist and math major |
| 2018 - 2019 | University of California, Los Angeles
Mathematics and computer science |
| 2018 | Canada/USA Mathcamp |
| 2017 - 2018 | Harvard University Extension
Mathematics |
| 2014 - 2018 | Lexington High School |

Research Experience

- 2020 UofT iGEM team
- 2019 UCLA iGEM team
Worked with Mark Arbing at the Protein Expression Lab at the UCLA-DOE Institute and with Todd Yeates at the Yeates Lab.
- 2017 - 2018 Student researcher
MIT Media Lab
Worked with Maksym Korablyov and Dr. Joseph Jacobson on low-data transfer learning using capsule networks.
- 2016 - 2018 Student researcher
MIT Affinity project
Worked with Maksym Korablyov, Dr. Joseph Jacobson, Kfir Schreiber, Isaac Wolverson, Aditi Harini, and Manvitha Ponapatti on developing a deep learning library for molecular geometry.
- 2016 - 2017 Student researcher
Biomedical Cybernetics Laboratory, Harvard University
Conducted research on predicting biological properties of genomes with deep learning with Adithya Vellal and Dr. Gil Alterovitz
- 2016 - 2018 Student researcher
MIT PRIMES program
- 2015 Student researcher
Draper laboratory
Created personalized biosurveillance software with Albert Gerovitch and Gregory Barboy at Dr. Natasha Markuzon's lab.

Papers

1. Gritsevskiy, A. and Korablyov, M. (2018) Capsule networks for low-data transfer learning. Preprint at arXiv:1804.10172
2. Gritsevskiy, A. (2017) Towards Generative Drug Discovery: Metric Learning using Variational Autoencoders. Preprint at math.mit.edu.
3. Gritsevskiy, A. and Vellal, A. (2016) Development and Biological Analysis of a Neural Network Based Genomic Compression System. Preprint at math.mit.edu.
4. Gerovitch, A., Gritsevskiy, A., and Barboy, G. (2015) Mobile Health Surveillance: The Development of Software Tools for Monitoring the Spread of Disease. Preprint at math.mit.edu.

Teaching

2019	Taught two one-day courses on deep learning and the curse of dimensionality at UCLA Splash
2018	Co-taught a class on the curse of dimensionality with Michelle Hung at Canada/USA Mathcamp
2018	Taught a three-day class on neural networks for visual recognition, inspired by Stanford's CS231n
2017	Taught two one-day classes on deep learning and molecular orbital theory at Lexington Splash

Lectures

2019, UCLA	Lie Groups in Physics
2018, MIT	Capsule Networks for Low-Data Transfer Learning
2017, MIT	Deep Learning Techniques for the Determination of Cross-Species Structural Gene Expression

Recognition

2019	Best Overall Hack—UCLA Hack On The Hill
2019	First place, UCLA algorithms competition
2018	National AP Scholar
2017	National Merit Scholarship Semifinalist
2017	DOE National Science Bowl Wildcard Award
2017	Perfect SAT score in chemistry, molecular biology, and mathematics
2017	United States Computing Olympiad—Gold level
2016	Chinese-American Biomedical Association High School Research Award
2016	Musical compositions chosen for performance in Boston, MA and St. Petersburg, Russia

Expository writing

1. Hung, M. and Gritsevskiy, A. (2018) The Curse of Dimensionality.

Relevant Projects

I have worked on dozens of artificial intelligence, reinforcement learning, and robotics projects. Details available upon request.

Industry experience

2019	Developed blind-spot vehicle radars at Veoneer
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Coursework

Neural Networks and Deep Learning, Chaos Fractals and Dynamics, Computer Organization, Enriched Data Structures and Analysis, Software Tools and Systems Programming, UCLA Directed Reading program—project on representations of Lie Groups, Software Design, Artificial Intelligence, Groups,

Rings, and Fields, Drug delivery and controlled drug release, [Graduate] Advanced Methods in Bioinformatics, English composition, Real Analysis [Honours], Molecular biology, Introduction to computer science I&II, Algebra [Honours], Linear Algebra [Honours], Elementary Swedish

Standardized testing

800/800	SAT Math Level II
800/800	SAT Chemistry
800/800	SAT Molecular biology
770/800	SAT United States History
5/5	AP Physics C: Mechanics
5/5	AP Physics C: Electromagnetism
5/5	AP Macroeconomics
5/5	AP Microeconomics
5/5	AP Calculus BC
5/5	AP Computer Science A
5/5	AP Biology
5/5	AP Chemistry
5/5	AP World History
5/5	AP United States History
1570/1600	SAT