

# Max Daniels – Curriculum Vitae

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## Education

NORTHEASTERN UNIVERSITY – Boston, MA

September 2019 – Present

Khoury College of Computer Sciences

Candidate for B.S. degree in Computer Science and Math (Combined) with a minor in Physics. Expected May 2023.

**GPA:** 3.99/4.00, Dean's List (2019-Present)

### Relevant Coursework:

Graduate: Probability 1, Real Analysis 1 and 2, Algorithms, Machine Learning, Theory of Computation, Special Topics in AI  
Undergraduate: Mathematical Methods of Physics, Differential Geometry, Linear Algebra, Object Oriented Design

## Technical Skills

### Languages:

| Python, Numpy, Tensorflow, Pytorch, Matplotlib  
| HTML, CSS, Javascript, D3.js

### Tools and Systems:

| Git, Ubuntu, Docker, Bash Scripting  
| LaTeX

## Papers & Publications

**M. Daniels**, "Statistical Distances and Their Implications to GAN Training," 2019. Workshop Article, VISxAI Workshop at IEEE VIS 2019. Available: <http://qnkxsovc.gitlab.io/prob-vis>. **Honorable mention for best submission to the workshop.**

**M. Daniels**, R. Heckel, and P. Hand, "Removing the representation error of GAN image priors using the deep decoder," 2020. [Online]. Available: <https://openreview.net/forum?id=rkegcC4YvS>.

## Talks

"Statistical Distances and their Implications to GAN Training" at IEEE VIS, VISxAI Workshop October 2019

- | Presented independent work in at international conference workshop.
- | Article provides interactive explanations of statistical distances such as Kullback Leibler and the Wasserstein Distance, and demonstrates their relevance to the design of GAN training algorithms.

Expository talk on "Recovering low-rank matrices from few coefficients in any basis" by D. Gross. January 2020

- | Given at Northeastern University, in CS 7180 Special Topics in AI to an audience of Professors and PhD. Students.

Northeastern University ASME Machine Learning Workshop

June 2019

- | Organized a three-week Machine Learning workshop for Northeastern students. Developed new curriculum and practice exercises. Instructed students during lectures.
- | Emphasis placed on regression, classification, decision trees, and boosting models.

## Awards

Goldwater Nominee

December 2019

- | Received Northeastern University's nomination for the Barry Goldwater Undergraduate Research scholarship.

Summit Research Award

September 2019

- | Received Northeastern University internal research award of \$3000.

Honors Early Research Award

February 2019

- | Received Northeastern University Honor's Program award of \$1000 for outstanding research by a freshman or sophomore student.

## Service & Extracurriculars

Volunteer Tutor

May 2019 to Present

- | Volunteer tutor for peers in CS 6140: Machine Learning and CS 3000: Algorithms and Data

Course Assistant for CS 1800: Discrete Structures

January 2019 to Present

- | Assist Prof. Virgil Pavlu with his CS 1800: Discrete Structures course by helping students during weekly office hours and writing homework/extra credit math problems.

Northeastern University Husky Hunt Planning Committee

June 2019 to Present

- | Planning committee member for Northeastern University's annual 24-hour scavenger hunt, Husky Hunt, typically with 50 teams and over 500 participants.
- | Design and test quiz questions for the qualifying quiz. Help with logistics and event planning.

Wheel Thrown Ceramics at MIT Student Art Center

June 2019 to Present

- | Intermediate level wheel thrown ceramicist.