Aaron Lou

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Education

Cornell University Aug 2017 - May 2021
B.A. in Computer Science, B.A. in Mathematics
Ithaca, NY | GPA: 3.96/4.0

Conference Publications

Aaron Lou*, Derek Lim*, Isay Katsman*, Leo Huang*, Qingxuan Jiang, Ser-nam Lim, & Christopher De Sa. "Neural Manifold Ordinary Differential Equations". Will apear at *NeurIPS 2020: Thirty-fourth Conference on Neural Information Processing Systems*, December 2020.

Aaron Lou*, Isay Katsman*, Qingxuan Jiang*, Serge Belongie, Ser-nam Lim, & Christopher De Sa. "Differentiating through the Fréchet Mean". In *ICML 2020: the Thirty-seventh International Conference on Machine Learning*, July 2020.

Workshop Publications

Horace He, **Aaron Lou***, Qingxuan Jiang*, Isay Katsman*, Serge Belongie, & Ser-nam Lim. "Adversarial Example Decomposition". In *SPML 2019: ICML Workshop on Security and Privacy in Machine Learning,* June 2019.

In Submission

Aaron Lou, Maximilian Nickel, Brandon Amos. "Deep Riemannian Manifold Learning". Submitted to *DiffœGeo4DL 2020: NeurIPS workshop on Differential Geometry Meets Machine Learning,* Dec 2020.

Research Experience

Facebook AI May 2020 - Aug 2020
Research Intern | New York, NY

- Topology and data augmentation w/ Dr. Ser-Nam Lim.
- Manifold learning w/ Dr. Brandon Amos & Dr. Maximilian Nickel

Cornell University Vision and Learning Aug 2018 - Present
Undergraduate Researcher | Ithaca, NY

- Geometric machine learning w/ Prof. Christopher De Sa.
- Adversarial examples w/ Prof. Serge Belongie & Dr. Ser-Nam Lim.

Industry Experience

Google May 2019 - Aug 2019
Software Engineering Intern | Mountain View, CA

- Google Maps incognito mode w/ Satwika Sarkar

Awards

ICPC North American Championship Bronze Medal	Feb 2020
ICPC Greater New York Regional Champion	Oct 2019
Putnam Exam Top 250	Dec 2018
Cornell Freshman Math Exam Champion	May 2018

Teaching

CS 5199 - Competitive Programming — Spring 2019, Fall 2019
TA for CS 2802 - Honors Discrete Structures — Spring 2019

Service

Mentorship

CUVL Co-President — May 2020 - Present
– Led organization in promoting and providing resources for undergraduate research in machine learning.

Community Contributions

NeurIPS 2020 DiffGeo4DL Workshop - Reviewer
NeurIPS 2020 - Secondary Reviewer

Invited Talks

Spotlight talk at ICML INNF Workshop — Jul 2020

Graduate Coursework

Completed during undergrad at Cornell (6xxx is PhD level)

- CS 6784 – Deep Generative Models
- CS 6787 – Advanced Machine Learning Systems
- Math 6110 – Real Analysis
- Math 6120 – Complex Analysis
- Math 6310 – Abstract Algebra I
- Math 6320 – Abstract Algebra II
- Math 6410 – Enumerative Combinatorics
- Math 6520 – Differentiable Manifolds
- Math 6710 – Probability Theory I
- ORIE 6300 – Mathematical Programming I