

Ethan Lu

+1 (310) 866 9152 | ethanlu@andrew.cmu.edu | <https://elu00.github.io>

EDUCATION

AUG 2018-PRESENT	Bachelor's of Science, Carnegie Mellon University , Pittsburgh Major in Mathematical Sciences, Minor in Computer Science CURRENT GPA: 4.0/4 Relevant Classes: Introduction to Undergraduate Research, Math Studies Algebra/Analysis I, Great Theoretical Ideas in Computer Science, Vector Analysis, Matrix Theory
AUG 2014 - MAY 2018	Non-Degree Seeking, University of Nevada, Reno GPA: 4.0/4 Relevant Classes: Introduction to Analysis I, Differential Equations, Linear Algebra, Statistics 352
AUG 2013 - MAY 2018	High School Diploma at The Davidson Academy of Nevada , Reno

WORK AND RESEARCH EXPERIENCE

APRIL 2019-PRESENT	The Geometry Collective @ CMU. Research in computer graphics and geometry under the supervision of Professor Keenan Crane. Focus on algorithms and optimization for intrinsic geometry processing.
JUN 2017 & 2018	Summer Mathematics Research Training Camp at TEXAS A&M UNIVERSITY High school research camp led by Professors Kuchment, Zelenko, and Shatalov. 2017: Galois Theory, finite fields, Reed-Solomon error correcting codes 2018: Application of Fourier Transform to Medical Imaging, Radon Transform
SEPT 2016-JAN 2018	Tutor at UNIVERSITY OF NEVADA, RENO MATH CENTER Hired to tutor UNR students in all available undergraduate math, statistics, and physics courses. Organized, created, and led comprehensive review sessions for midterms/finals.
JUL-AUG 2017	Math Faculty at A-STAR MATH CAMPS, Santa Clara, CA Created, developed, and taught intensive 4-block 3-week curriculum to promote problem solving and competition skills. Revised and rewrote existing Number Theory curriculum.

PUBLICATIONS

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1. E. Fang, J. Jenkins, Z. Lee, D. Li, Ethan Lu, S. Miller, D. Salgado, J. Siktir, *Central Limit Theorems for Compound Paths on the 2-Dimensional Lattice*, submitted to *The Fibonacci Quarterly*.
<https://arxiv.org/abs/1906.10645>

PROJECTS

NOV 2018	[ML FINALIST] HACKPRINCETON 2018: styledev.rt https://github.com/elu00/styledev.rt Implemented real-time style transfer through application to game assets.
SEPT 2018	HACKCMU 2018: viz.ml https://github.com/TheNumbat/viz.ml Implemented Barnes-Hut TSNE algorithm for use in 3D Visualization of TSNE-Style datasets.

INTERESTS AND ACTIVITIES

Mathematics

- Volunteer for the CMU Informatics and Mathematics Competition (CMIMC), the Princeton University Mathematics Competition (PUMaC), and the Harvard-MIT Math Tournament (HMMT).
- Participant in the Intermountain and Putnam Competitions (21 pts) (2015-present).

SKILLS

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- Languages: C#, C/C++, Python, Julia, R, \LaTeX
 - Software experience: Matlab, Cinema 4D, Vegas Pro, OpenSCAD, Adobe After Effects/Premier