Julian Gold

julian.thomas.gold@gmail.com
linkedin, github

Academic researcher with PhD in math (probability) from UCLA, transitioning to a machine learning role as a research scientist or data scientist. Looking to contribute to an innovative, challenging work environment. Demonstrated ability to work effectively and collaboratively in team settings.

Skills

programming Python, TensorFlow, PyTorch, OpenCV, PIL, Colab, SQL

language English (native), French (basic), Mandarin (basic)

Education

Ph.D. in Mathematics, *University of California, Los Angeles* 2012 – 2017
specialization: random networks, statistical mechanics. advisor: Marek Biskup

B.S. (highest honors) **in Mathematics**, *University of California, Davis* 2007 – 2012

Work experience

Northwestern University, Dept. of Mathematics 2017 – 2021

RTG (Research Training Grant) postdoctoral fellow September 2017 – August 2018, working under Antonio Auffinger, my sponsoring scientist for an NSF postdoc September 2018 – August 2021.

researcher Leveraged analytic skills to study models with applications in biology, physics, and computer science. Lead to the joint work with A. Auffinger listed below. Gave invited talks and attended conferences relevant to research goals and interests.

organizer As a co-organizer of the Northwestern Probability Seminar, invited and hosted mathematicians (from U.S. and internationally) to speak to our group on their work.

instructor Classes taught at Northwestern include one at the graduate level, and an introductory math course taught through NPEP (Northwestern Prison Education Program).

UCLA, Department of Mathematics 2013 – 2017

researcher Developed analytic skills, both at UCLA and at an IHP (Institut Henri Poincaré) research trimester. Resulted in main component of PhD, *"Isoperimetry in..."* below, and one other solo work. Began collaboration with Cortines and Louidor, leading to paper below.

teaching assistant Courses include calculus, linear algebra, and probability.

Projects

computer vision project Developed a training pipeline using the Faster R-CNN architecture on a hand-labeled scientific document dataset. Project details are here.

Selected publications and preprints

(traditionally, author ordering in math papers is alphabetical, in contrast to other academic fields where papers have a designated first author) More project details here.

The number of saddles of the spherical p-spin model (preprint), with A. Auffinger

Dynamical freezing in a spin glass system with logarithmic correlations (link), with A. Cortines and O. Louidor

Isoperimetry in supercritical bond percolation in dimensions three and higher (link)