Noah Krever

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RESEARCH INTERESTS

Algorithmic Game Theory, Computational Economics, Optimization, Uncertain & Online Learning, AI for Society

EDUCATION

Columbia University | B.A. in Data Science (CS & Stats) with Mathematics concentration   May 2022
Cumulative GPA: 3.78/4, **Major GPA:** 3.90/4

PUBLICATIONS

(P: Preprint & Manuscript, C: Conference & Journal, W: Workshop & Demo, *: Equal contribution, †: Equal senior role)

[C1] GUARD: Constructing Realistic 2-Player Matrix & Security Games for Benchmarking Game-Theoretic Algorithms
Noah Krever, Jakub Černý, Moïse Blanchard, Christian Kroer
Conference on Neural Information Processing Systems (NeurIPS) 2025
🎗 **Spotlight (Top 3% in Datasets & Benchmarks)**

[P1] Is Quasar PG1302-102 Periodic?
Noah Krever, Maria Charisi, Daniel D'Orazio, Zoltan Haiman
Manuscript in prep. for *APJL* or similar

RESEARCH EXPERIENCE

Columbia IEOR, Lily Xu Group | NY, NY
Researcher, Optimization and AI   Oct. 2025 – Present
- Optimizing monitoring resources for verifiable eco-credit allocation mechanisms and decision protocols
- Modeling metrics & sensor readings for MDPs, multi-armed bandits, and game-theoretic data-auditing

Columbia IEOR, Christian Kroer Group | NY, NY
Researcher, Algorithmic Game Theory   June 2024 – Dec. 2025
- Published first-author spotlight paper introducing statistical theorems and our novel game theory framework
- Implemented original suite of standard algorithms for Nash and Stackelberg equilibria, mixed-integer linear programming, incremental strategy generation (double oracle solvers), and self-play with no-regret learners
- Built flexible object-oriented framework for converting real-world data into hyper-realistic security game instances

Columbia University Physics Department, Zoltan Haiman Group | NY, NY
Researcher, Computational Astrophysics   Jan. 2019 – May 2022
- Lead project studying false periodicities in quasar time-domain surveys, evaluated binary black-hole candidate
- Utilized HPC cluster for large-scale time-series simulations & machine learning toolkits for statistical analysis
- Scripted algorithms to perform spectral analysis, Markov processes, signal processing, and Bayesian model-fitting

TCNJ Physics Department, Tuan Nguyen Lab | NY, NY
Summer Researcher, Computational Biophysics   June 2017 – Aug. 2017
- Mapped network connectivity using single cell laser scanning photo stimulation with calcium imaging
- Wrote original algorithms for automating network analysis, cut processing time from one week to 3 seconds

WORK EXPERIENCE

Roc360 | NY, NY

Data Scientist   June 2022 – Present
- Solving open-ended problems in Markov processes, graph theory, network modeling & algorithms
- Training, deploying, automating wide range of machine learning models for classification, ranking, prediction
- Leading development of SQL/Python analytics data layer linking pipelines and models using dbt

Poker | NY, NY & Philadelphia, PA

Semi-Professional Player & Coach   Sept. 2021 – Present
- Coaching a selective group of ~10 highly motivated students weekly through game-theory optimal (GTO) poker principles, solver study, database analysis, leak-finding, hand reviews
- Playing mid-stakes NLHE cash games semi-professionally, online $1/$2 and live up to $10/$20
- Creating online educational video-form content for poker strategy improvement

AWARDS AND HONORS

Spotlight Paper (Top 3%), NeurIPS   2025
GUARD: Constructing Realistic Two-Player Matrix and Security Games for Benchmarking Game-Theoretic Algorithms

Dean's List, Columbia University   2019 – 2022
Awarded to the Columbia University students maintaining highest GPAs

Kluge Scholar, Columbia University   2018 – 2022
Scholarship program offered to select high-achieving students, grants funding for research and internships

TEACHING EXPERIENCE

Artificial Intelligence (COMS 4701)   Spring 2022
Teaching Assistant at Columbia University (Instructor: Prof. Tony Dear)

Intro to Computing in Python (ENGI 1006)   Fall 2020, Fall 2021
Teaching Assistant at Columbia University (Instructor: Prof. Daniel Bauer)

SELECTED SIDE PROJECTS

Regret Minimization in 3-Player Poker – Customized CFR+ to solve a simplified variant of post-flop 3-player poker and displayed/verified output strategies. Presented for course IEOR 4530: *AI, Games, and Markets*. **Grade:** 100/100

Understanding Neural ODEs for Time Series – Implemented novel Neural ODE architectures with adjoint sensitivity training for time series forecasting. Presented for course COMS 4995: *Neural Networks & Deep Learning*. **Grade:** 92/100

Traversing Latent Spaces for Interpretability – Novel exploration of deep classifiers' latent spaces, probed decision-boundaries with perturbations & class. loss VAE. Presented for course COMS 6998: *Adv. Deep Learning*. **Grade:** 100/100

ACTIVITIES

Columbia Undergraduate Science Journal (CUSJ), *Editor & Board Member for CU Research Journal*   Oct. 2018 – May 2022

Columbia Poker Club, *Founder & President (500+ Member Club Organizer, Teacher, Player)*   July 2021 – May 2022

Columbia University Esports Club, *Rocket League Team Captain & Founder (Top 0.1% of players)*   June 2020 – May 2022

Columbia University Chess Club, *Member (2200 online ELO)*   Sept. 2020 – May 2022