Yanshuai Qin

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Profile

PhD in Mathematics from UC Berkeley with postdoctoral research experience in Germany, specializing in arithmetic geometry. Strong background in probability, statistics, and numerical methods, with hands-on experience implementing deep learning models and analyzing complex datasets. Combines rigorous analytical thinking with strong quantitative problem-solving skills.

Technical Skills

Programming	Python, C++, Git/Github, Linux
Python ecosystem	NumPy, Pandas, SciPy, Scikit-learn, PyTorch, TensorFlow, Jupyter
Quantitative background	Probability, statistics, machine learning, numerical analysis
Languages	Chinese (native), English (fluent)

Selected Project

- **Nanochat End-to-End LLM Pipeline** (GitHub): Built an end-to-end LLM pipeline on Kaggle around the `nanochat` codebase, covering tokenizer training, base-model pretraining, supervised fine-tuning, distillation, DPO/PPO/RL post-training, quantization, evaluation, and deployment; adapted the workflow to run on 2x T4 GPUs by debugging distributed execution, stabilizing data loading in notebook environments, and validating each stage with working checkpoints and evaluation outputs.

Experience

Postdoctoral Researcher (Supervisor: Moritz Kerz) *Nov 2023 – Dec 2025*
University of Regensburg, Germany

- Jointly with a mathematician from IMJ-PRG, completely solved a difficult problem raised by Skorobogatov and Zarhin a decade ago; invited to speak at EPFL and IRMA, and selected to present the work at 2025 SRI in Algebraic Geometry, a leading once-a-decade conference.
- Completed, with an IBM cryptography scientist and an expert in p-adic methods, a full generalization of the Artin-Grothendieck theorem (1968) to arbitrary dimension, building on a collaborator's breakthrough on the 30-year-old Berthelot conjecture; the work was presented by the collaborator at an IHES conference.

Visiting Scholar *Oct 2023 – Nov 2023*
Beijing International Center for Mathematical Research, Beijing

Graduate Student Instructor and Researcher *Aug 2018 – Sep 2023*
University of California, Berkeley

- Taught courses in numerical analysis/optimization, probability, statistics, and differential geometry.
- Conducted research in arithmetic geometry, resulting in 5 publications and multiple invited talks at international conferences and institutes, including PRIMA Congress 2022.

Education

PhD, Mathematics, University of California, Berkeley (Advisor: Xinyi Yuan) 2018–2023
MSc, Mathematics, Nanjing University 2016–2018
BSc, Mathematics, Nanjing University 2011–2015

Awards

- Lehmer Fellowship in Number Theory (Spring 2022); UC Berkeley Summer Grants (2020–2023).
- UC Berkeley Conference Travel Grant.