Jason Gross

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Research Interests

- Programming Languages and AI: Löb's Theorem, Type Theory, Compact Proof Generation
- Trust and Security Engineering: Scalable Formal Verification, Cryptography, Performance Engineering

Experience

Education

Massachusetts Institute of Technology 2013–2021
PhD in Computer Science Cambridge, MA
Advisor: Adam Chlipala
Thesis: Performance Engineering of Proof-Based Software Systems at Scale
SM Thesis: An Extensible Framework for Synthesizing Efficient, Verified Parsers

Massachusetts Institute of Technology 2009–2013
BS in Mathematics and Physics Cambridge, MA
GPA: 4.6/5

Internships

Professional Activities

- Co-maintainer of the Fiat Cryptography project (`mit-plv/fiat-crypto` on GitHub)
- Co-maintainer of the homotopy type theory Coq repository (`HoTT/HoTT` on GitHub)
- Program Committee Member of ITP 2023 and CoqPL 2022
- Supervising independent research in formalizing correspondence of affine logic to two-player games
- Instructor at MIT ESP Programs, Winter Applied Rationality Program, Monsoon Math Camp
- Circling Facilitator at The Relateful Company
- Member of SIPB (Student Information and Processing Board)

Select Past Activities

- Particpant in MIRI Decision Theory Workshops
- Volunteer at CFAR workshops
- President of MIT Tech Squares
- Contributor to the SIPB BarnOwn project
- Project leader for MITeX, an online interface for composing LaTeX
- TA for 6.172: Performance Engineering
- TA for 8.012: Physics I and 8.022: Physics II at the Experimental Study Group
- Participant at Cananda/USA Mathcamp

Programming Languages

- Proficient: Coq, Mathematica, git, Python, JavaScript, BASIC
- Working knowledge: C, C++, Agda, OCaml, Haskell, Scheme, HTML, CSS, Perl, Java
- Basic knowledge: Matlab, Lean, Idris, Ruby, Go, Ur/Web, x86 Assembly