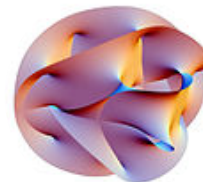# AARON KRIEGMAN

Software Engineer and Mathematician

@ aaronkplus2@gmail.com   617-615-1613   20 Dorcar Rd, Newton, MA, 02467   akriegman

PROJECTS

Metrica

A building game in non-Euclidean geometry made in Unity with GlmSharp, with my own graphics shaders and physics implementation using quaternions. Check it out on YouTube.

Wave Simulation

An interactive simulation of the wave equation in C++ using convolutions and FFTs from the Eigen Tensor module, with SFML. Check it out on GitHub for pictures.

Liquid Go

A game based on Liquid Wars and Go, made with React.js and Rust using Wasm-Bindgen, WebRTC, Socket.IO, R*-trees, and more. Check it out at liquidgo.xyz.

Check out my GitHub to see more projects with pictures.

COURSEWORK & GRADES

Interactive Computer Graphics	4.0
• Using OpenGL in C++ with Qt	
• Graduate course at University of Pennsylvania	
Computer Organization	4.0
• Created a working CPU in Logisim for my final project	
Computational Geometry	3.7
Information Theory and Data Science	4.0
Analysis of Algorithms	4.0
• With data structures as a prerequisite	
Lie Groups and Representation Theory	4.0
• Graduate course at University of Pennsylvania	
Mathematical Economics	4.0

EXPERIENCE

Software Engineering Intern
DreamsAI

July 2021 - September 2021   Cambridge, UK

• Worked on a cryptocurrency fintech service. Used technologies including PostgreSQL, Express.js, Jest, React, Linux, Bash, cURL to interact directly with the Ethereum Blockchain, and more.

Math Camp Counselor
Ross Mathematics Program at Ohio State University

June 2020 - Aug 2020   online

Research Experience for Undergraduates
Texas A&M University

June 2019 - Aug 2019   College Station, TX

LANGUAGES

C++
OpenGL | Eigen Tensors | Qt | SFML

Python
Numpy | Scipy | Pandas | Sage

Rust
Wasm-bindgen | Nannou

Bash
binutils | cURL | Systemd

Javascript
WebRTC | React | Socket.IO | Express

Julia
ForwardDiff | Symbolics

EDUCATION

BA. in Mathematics (in progress)
University of Cambridge

Oct 2020 – June 2023

Haverford College

Sept 2018 – June 2020

Studied mathematics and computer science at Haverford for two years then transferred to Cambridge.

MOST PROUD OF

USA Mathematics Olympiad
Qualified twice in 2017 and 2018.

Putnam Mathematics Competition Top 500
Came in top 500 in the US's premier college mathematics competition twice, in 2018 and 2019.

MY PLANS

Currently studying mathematics at Cambridge University. Looking for internships and considering taking a gap year to work.

PUBLICATIONS

📄 **Journal Articles**

• Asimina Hamakiotes, Aaron Kriegman and Wei-Lun Tsai (2019). "Asymptotic Distribution of the Partition Crank". In: *The Ramanujan Journal.*