

## Morgan Thomas

morgan.a.s.thomas@gmail.com • (734) 355-3870 • Boulder, CO, USA  
GitHub: <https://github.com/morganthomas>  
LinkedIn: <https://www.linkedin.com/in/morgan-thomas-29a923b7>

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# Software Engineer with Leading-Edge Applied Math

Versatile problem-solver employing best practices in analysis, engineering, algorithms, and code.

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**Core Competencies** Delivering correct software based on solid engineering  
Clear technical communication tuned to audience and context  
Sound and innovative mathematical analysis of real-world problems

**Selected Skills** **Programming languages**  
Haskell JavaScript C# Rust dabbled in many  
**Software engineering**  
Agile Testing/TDD Git Web frontends and APIs Linux Windows  
Concurrency (locks, STM, streams, ...) Functional programming OOP  
**Computer science**  
Data structures Complexity analysis (big- $O$ , etc.) Theory of languages  
**JavaScript technologies**  
Node.js React Angular Vue ES6+ Webpack Express Swagger  
**Applied math**  
Logic Statistics and probability Graph theory  
Calculus Linear algebra Numerical optimization  
**Communication**  
Documentation/technical writing Teaching Self-teaching Good listener

**Professional Experience** **Developer, Co-Founder. Kassir. Jun 2018 – present.**  
Using Haskell to develop an algorithmic cryptocurrency trading system.

**Developer & Algorithms Specialist. InnoTrade.io. Mar 2018 – Jun 2018.**  
Used Haskell and Rust to develop an algorithmic cryptocurrency trading system.

**Developer. IHS Markit. Oct. 2015 – May 2018.**  
Created and maintained Web based financial research tools for some of world's largest investment management companies, using ASP.NET and JavaScript (jQuery, React, Vue, Node).

**Haskell R&D Project** **FreeCat** <https://github.com/morganthomas/freecat>  
A programming language descending from Haskell and Idris, founded on new ideas in type theory. Developing in Haskell.

**Education** **University of Connecticut. Philosophy, MA. 2013 – 2015.**  
Mathematical research resulted in three publications in top logic journals.  
Cumulative GPA 4.1. Graduated Spring 2018 (delayed filing papers).

**Arizona State University. Psychology, BS. 2009 – 2013.**  
Minors, Mathematics and Philosophy. Thesis on philosophy of computation.  
Cumulative GPA 3.83.

**Academic Honors** Top scorer, Putnam Mathematical Competition at Arizona State University. 2013.  
National Merit Scholar. 2009.