**Morgan Thomas**

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# Software Engineer with Leading-Edge Applied Math

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

**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 Vue React Angular 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.