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# 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
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.io. Jun 2018 – present.
Using Haskell to develop an algorithmic cryptocurrency trading system.

Contractor. Spectrum. Sep 2018 – present.
M&E for legacy JavaScript frontend for flagship set top box product, including build system upgrades and memory management overhaul.

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).

Selected 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 (due to delay 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.