Matt Dziuban

703-973-6717 • mrdziuban@gmail.com • Boston, MA
mattdziuban.com • github.com/mrdziuban • linkedin.com/in/mrdziuban

Summary

- Hands-on, highly technical software engineer with 12+ years of experience across the full stack, with a focus on designing scalable backend architecture.
- Leader by example, combining technical expertise with pragmatic management to elevate team practices.
- Passionate about building tools and systems for engineers, including developer productivity, functional programming, and language-adjacent tooling.
- Fast learner, creative problem solver, and advocate for correctness, performance, and thoughtful design.

Skills

Languages:	Scala, TypeScript, JavaScript, SQL, Ruby, Java, Python, Elixir, Rust, Go, F#, Haskell
Tools & Infrastructure:	React, Rails, AWS, Docker, Terraform, SaltStack, Chef, Redis, MySQL, PostgreSQL, MongoDB, Nginx
AI Experience:	OpenAI, Anthropic (Claude), Google Vertex APIs, prompt design, and applied use in production
Strengths:	Distributed systems, developer tooling, static analysis, CI/CD automation, infrastructure as code

Professional Experience

BondLink

Director of Backend Engineering (October 2019 - Present)
Senior Software Engineer (September 2016 - October 2019)

Fintech startup modernizing the municipal bond market through data-driven investor tools. Advanced from senior IC to director while remaining deeply hands-on in architecture and code.

- **Backend architecture & systems design**
  - Built and maintained six backend services in Scala, applying strong functional programming principles with Cats and a focus on compiler-verified correctness.
  - Designed and implemented Debt Profile, a financial analysis tool for bond issuers to explore and plan around outstanding debt; built a daily XML diff pipeline with BaseX and MariaDB to power its data layer.
  - Developed Investor Activity, a user analytics and engagement platform providing insights on activity trends and details, with attention to performance on large datasets.
- **Developer tools & internal innovation**
  - Created `find-unused`, a Scala static-analysis tool leveraging TASTy metadata to detect unused definitions across multi-project builds; cleaned up ~5% (7k lines) of total code.
  - Built `scala-ts`, a compiler-inspired library generating TypeScript types and codecs with Scala 3 macros.
  - Introduced Drone-based CI/CD, self-hosted infrastructure, and automated deploy pipelines for all backend services.
  - Integrated `knip` to remove unused TypeScript code (~4% reduction).
- **AI integration**
  - Prototyped AI-driven bond sale bid prediction system using OpenAI API, improving iteration speed and model accuracy over time.
  - Used AI APIs for developer productivity tasks and experimental internal tooling.
- **Performance & reliability**
  - Refactored logging pipeline to structured JSON, improving CPU utilization by 21%, latency by 73%, and throughput by 372%.
  - Added rate-limiting and login-attempt tracking to strengthen security.
- **Leadership & collaboration**
  - Led and mentored a team of four engineers, driving architecture reviews and technical strategy.
  - Partnered with product, design, and frontend teams to align feature delivery with engineering best practices.

Localytics

Software Engineer II (April 2015 - September 2016)

Large-scale mobile analytics and marketing platform supporting millions of app users worldwide.

- **Performance engineering**
  - Reduced API request time by 25% and cache latency from 100 ms to 25 ms.
  - Led OS and runtime upgrades (Ubuntu 10.04 to 14.04, Ruby 1.9.3 to 2.2.2) via Chef automation; halved CPU time in Ruby and garbage collection with zero downtime.
  - Implemented circuit breaker protection to isolate DB slowdowns and keep APIs responsive.
- **Developer experience**
  - Built ChatOps deployment system allowing code deploys and database migrations via Slack.
  - Automated temporary staging environments and backups to improve engineering velocity.
  - Configured GoCD and designed tooling that enabled engineers to easily configure CI/CD pipelines with built-in best practices.
- **Data infrastructure**
  - Evaluated Snowflake as next-gen data warehouse; built dual-query replay tooling to benchmark real-world query performance vs. Vertica.

AmericanInno

Web Developer (October 2013 - April 2015)

Digital media company operating local tech-news sites.

- Facilitated platform migration from WordPress to custom PHP application.
- Built partner analytics product and full ingestion pipeline using MongoDB.
- Refactored backend for easy expansion into new markets (Chicago, Seattle, and Los Angeles).

Education

The College of William & Mary

Bachelor of Arts, Economics & Middle Eastern Studies
Graduated 2013

Projects

scala-ts

github.com/mblink/scala-ts

- Type-safe Scala to TypeScript code generator using macros and intermediate representation to support multiple output targets.
- Created a contract between backend and frontend types and eliminated risk of drift in API.

find-unused

github.com/mblink/find-unused

- Static analysis tool for detecting unused Scala code via TASTy introspection.
- Designed and optimized for monorepos.

AI bid predictions

- System leveraging OpenAI API for forecasting performance of competitive municipal bond sales.
- Achieved 90% accuracy against customers' bond sales.

A Search of Ice and Fire

asearchoficeandfire.com

- Single-page web app offering full-text search across ***A Song of Ice and Fire*** novels.
- Powered by Meilisearch and served with Nginx on Oracle Cloud.

SQL Formatter

mattdziuban.com/sql-formatter

- Polyglot SQL formatter built to explore cross-language compilation.
- Implemented in 12 languages, each compiled to JavaScript and with dedicated unit tests.