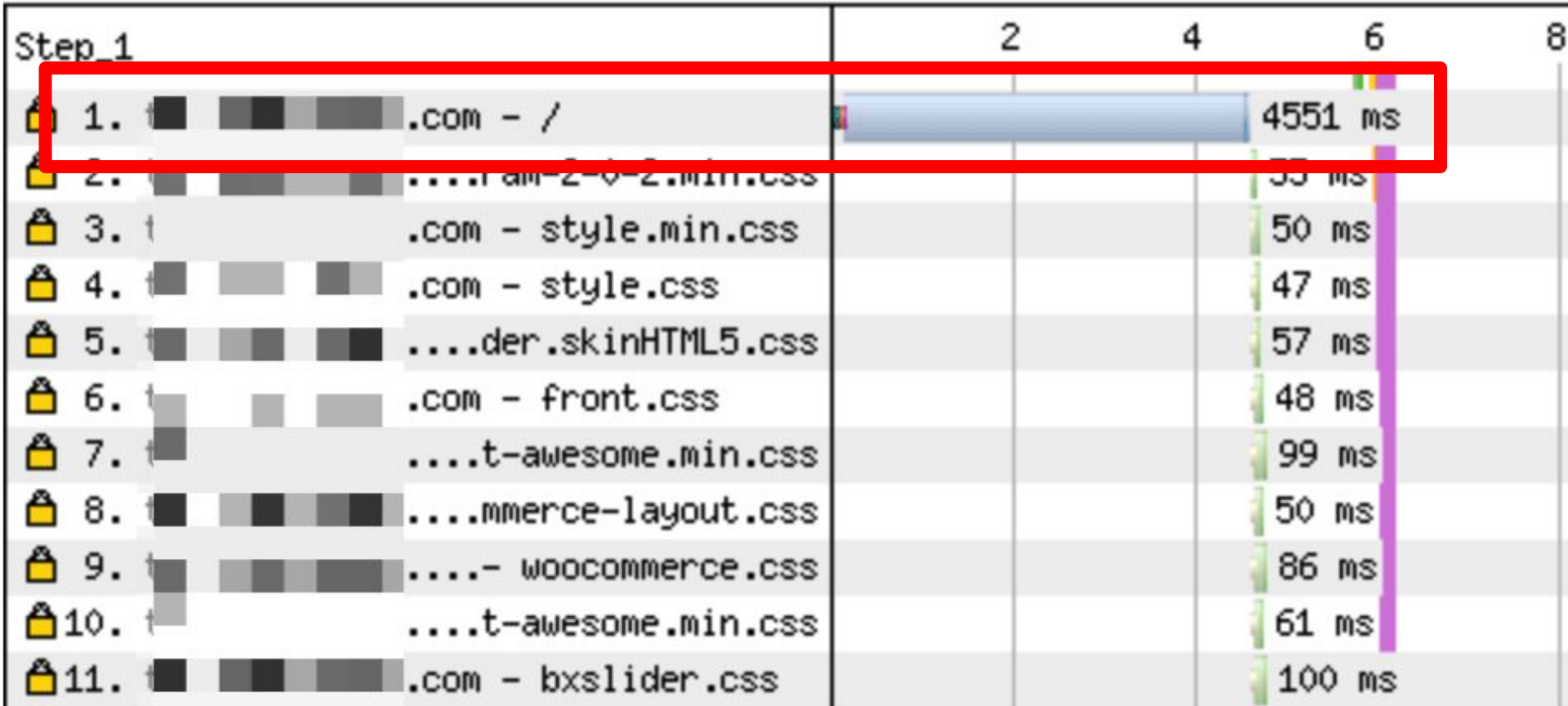


*Small Changes that Make*  
**BIG IMPACT**

Patrick Garman  
Co-Founder, CTO @ Mindsize



I am focused solely on the TTFB and stability.



# Frontend Optimization

Patrick Garman

Co-Founder, CTO @ Mindsize



- Reduce Images & Assets
  - Less Assets = Faster
- Optimize Remaining Assets
  - Smaller Assets = Faster
- Optimize Infrastructure
  - Nginx
  - PHP7
  - HTTP2
  - CDN

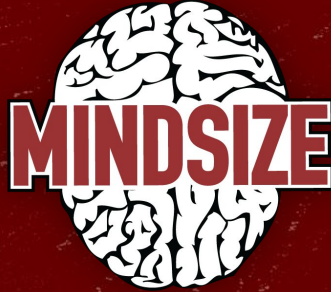




Patrick Garman

 @pmgarman

patrick@mindsizeme



Mindsizeme

 @mindsizeme

*We're Hiring!*  
*mindsizeme/careers*





There is no magic wand.



SMALL DECISIONS  
HAVE CONSEQUENCES





I FIXED IT WITH  
CACHING





# WEBHOOKS





*You're welcome!*





# VERIFIED REVIEWS





# CART FRAGMENTS





# SYNCHRONIZED SUBSCRIPTION RENEWALS





IMPACT  
Is  
RELATIVE







Everything is Relative. Most things are Exponential.



3300%

Average 20% growth month over month for 24 months





SIMPLE CHOICES  
CAN ALSO HELP





A man with dark, wavy hair and black-rimmed glasses is shown from the chest up. He is wearing a black leather jacket over a dark shirt. He has a serious, slightly concerned expression on his face. The background is a laboratory or office setting with various pieces of equipment, including a large desk lamp on the right and a smaller lamp on the left. The lighting is somewhat dim, with the desk lamps providing the main light source.

YOUR SCIENTISTS WERE SO PREOCCUPIED  
WITH WHETHER THEY COULD...

...THEY DIDN'T STOP TO  
THINK IF THEY SHOULD.



*YOUR SCIENTISTS WERE SO PREOCCUPIED  
WITH WHETHER THEY COULD...*

Search Management • CRM • Email Marketing  
ERP • Abandoned Cart Recovery • A/B Testing  
Conversion Tracking • Product Feeds • Live Chat  
Customer Service • Point of Sale • Accounting  
Marketing Automation • Product Recommendations  
Image Optimization • Business Intelligence

*...THEY DIDN'T STOP TO  
THINK IF THEY SHOULD.*



OFFLOAD.  
EVERYTHING.





# UNDERSTAND YOUR SITE



If someone has questions, can you answer them?



# MONITOR YOUR DATA





1.82s 28,840KB 0.0052s 19Q

Warnings (1)

Notices (1)

Queries

Queries by Caller

Queries by Component

Request

Admin Screen

Scripts

Styles

Hooks & Actions

Languages

HTTP API Calls (3)

Transient Updates (1)

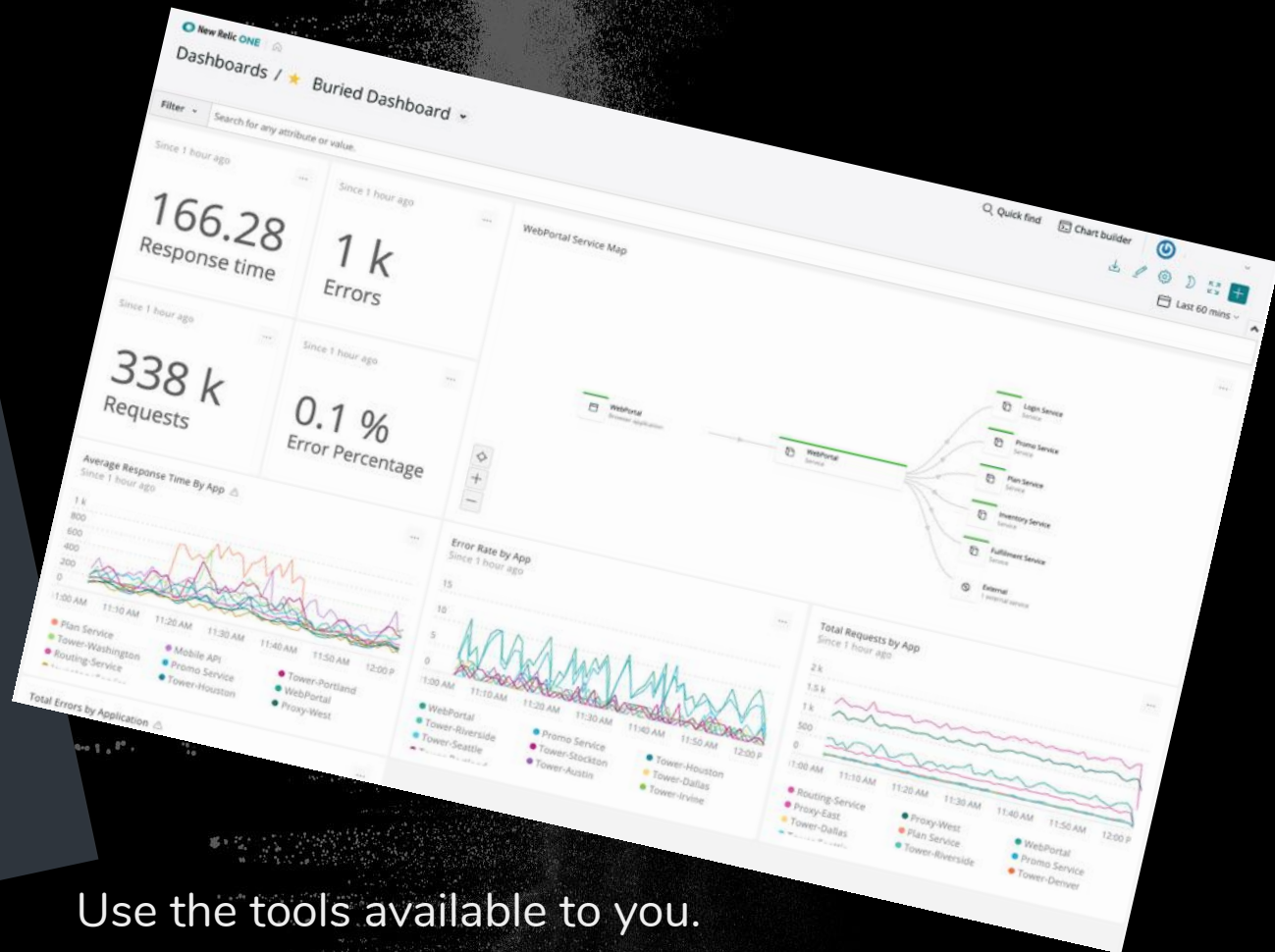
Capability Checks

Environment

`is_admin()`

`is_blog_admin()`

`is_main_network()`



Use the tools available to you.



- Queries
- Duplicate Queries (7)
- Request
- Blocks
- Template: storefront/page.php
- Scripts (50)
- Styles (25)
- Hooks & Actions
- Languages
- HTTP API Calls (1)
- Transient Updates
- Capability Checks
- Environment
- is\_front\_page()
- is\_page()
- is\_singular()
- is\_ssl()



This site is not too bad.



PHP Errors (7 Warnings)

Queries

Slow Queries (1)

Duplicate Queries (7)

Request

Template:

Scripts (45)

Styles (20)

Hooks & Actions

Languages

HTTP API Calls (3)

Transient Updates (111)

Capability Checks

Environment

Debug Bar: ElasticPress

is\_archive()

is\_ssl()

is\_tax()



When things are broken, Query Monitor lights up!



# Just how much data is created per order?

1 Order Post

+ 40 Order Metas

+ Number of Order Items

+ ( Number of Order Items \* 9 Order Item Metas )

+ Shipping Rate

+ 6 Shipping Rate Metas

+ Number of Taxes

+ ( Number of Taxes \* 6 Taxes Metas )

+ Order Notes & Meta

+ WC Admin Scheduled Actions for Reporting

+ Scheduled Actions & Webhooks



Just how much data is created per order?

**OVER 100 DATABASE  
INSERTS PER ORDER**

1 Order Post

+ 40 Order Metas

+ ( Number of Order Items \* 4 Order Item Metas )

+ ( Number of Order Items \* 9 Order Item Metas )

+ Shipping Rate

+ ( Shipping Rate Metas )

+ Number of Taxes

+ ( Number of Taxes \* 6 Taxes Metas )

+ Order Notes & Meta

+ WC Admin Scheduled Actions for Reporting

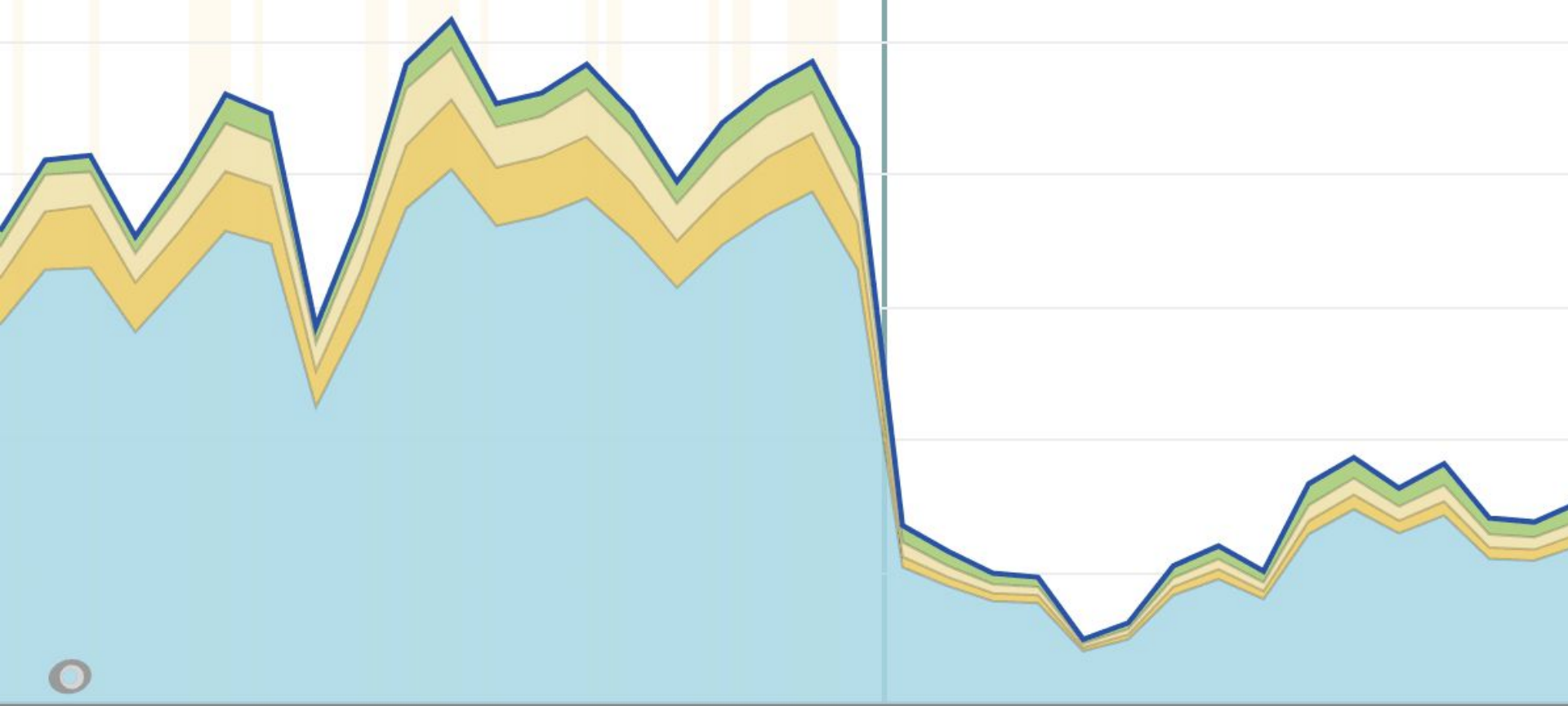
+ Scheduled Actions & Webhooks





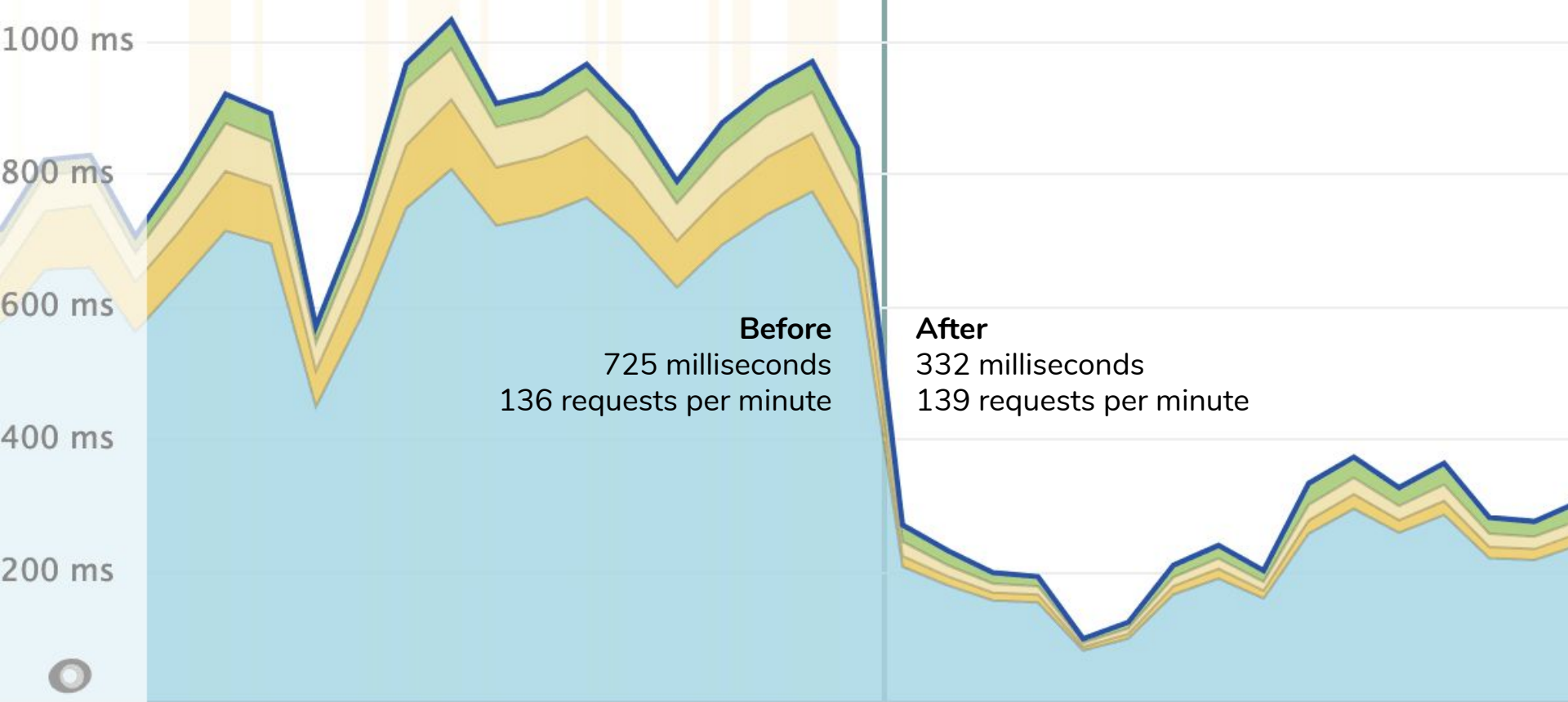
CLEAN UP  
YOUR DATA





Offloaded one log from MySQL.





54% Performance Improvement

# DATA DRIVEN DECISIONS



Staging sites and performance tests and analysis, oh my!



# BUILD YOUR ROADMAP



Where are you heading?



# BUILD YOUR TEAM



Who is responsible for what?



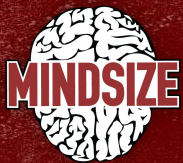
# PREPARE FOR THE WORST



If the worst happens, what will you do?



NEVER ASSUME.





# GET INVOLVED

Customer Research

[woocommerce.com/design-feedback/](https://woocommerce.com/design-feedback/)

Monthly Core Community Chats

[woocommerce.com/community-slack/](https://woocommerce.com/community-slack/)

Development

[github.com/woocommerce/woocommerce](https://github.com/woocommerce/woocommerce)



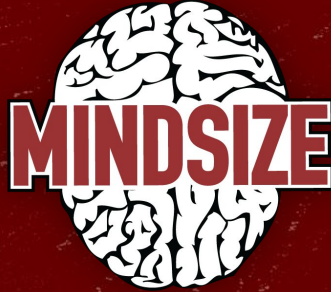




Patrick Garman

 @pmgarman

patrick@mindsizeme



Mindsizeme

 @mindsizeme

*We're Hiring!*  
*mindsizeme/careers*