

# CUPID – for joyful coding

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IFOKUS EDITION

# Motivation: not so SOLID

## 1. PubConf

- poking the bear

## 2. Extreme Tuesday Club

- accepting a challenge

## 3. Online conferences

- working to a deadline!

# Setting the scene

# Who are we writing code for?

*“Any fool can write code that **a computer** can understand.  
Good programmers write code that **humans** can understand.”*

– Martin Fowler

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Can we do better than **understand**?

*“**Habitability** is the characteristic of source code that enables [people] to understand its construction and intentions and to change it comfortably and confidently.*

*“**Habitability** makes a place liveable, like home.”*

– Richard P. Gabriel

# Habitable sounds better! What about joyful?

Think about a codebase that is joyful to work with

Can we describe what makes it joyful?

What kind of properties does joyful code have?

# Properties over principles

Principles are rules or guidelines

- They define conditions or boundaries
- Your code either conforms to the conditions or it is wrong

Properties are qualities or characteristics

- They define a goal or centre to move towards
- Your code is only ever closer to or further from the centre

# Properties for properties

## Practical

- easy to articulate, easy to assess, easy to adopt

## Human

- from the perspective of readers as well as writers

## Layered

- guidance for beginners, nuance for the more experienced

# CUPID – for joyful coding

- Composable – plays well with others
- Unix philosophy – does one thing well
- Predictable – does what you expect
- Idiomatic – feels natural
- Domain-based – in language and structure

# Composable

Code that is **easy to use** gets used, and used, and used!

**Small “surface area”**

- less to learn, less to go wrong, less to conflict

**Intention-revealing** name and purpose

- easy to discover, easy to evaluate

**Minimal dependencies**

- ‘You wanted a **banana** but you got a **whole gorilla**’ – Joe Armstrong

# Unix philosophy

‘Make each program **do one thing well**’ – and only one thing

- `ls` lists file details (but it doesn’t inspect files!)

Together with composability, there is nothing you can’t do!

- *“Expect the output of every program to become the input to another”*
- `cat | grep | sed | sort | uniq | ...`

Different from **SRP**

- about **what the code does**, not **how the code works**

# Predictable

Behaves as expected, with no surprises

- 'Passes all tests' – Kent Beck
- even when there are no tests!

## Deterministic

- does the same thing every time
- well-understood operating characteristics

## Observable

- in the technical sense – internal state can be inferred from outputs
- instrumentation, telemetry

# Idiomatic

## Uses language idioms

- standard features, constructs, libraries, frameworks, tools
- feels natural to work with, goes with the grain

## Uses local idioms

- house style: coding/design standards\*, or *de facto*
- aligned with project, dependencies, platforms, organisation

*You can only write **idiomatic code** if you **learn the idioms**!*

# Domain-based

## Uses domain language

- 'Code in the language of the domain' – 97 Things ☺
- and remember, there are multiple domains

## Uses domain structure

- Code for the solution, not the framework
- payments, loans, onboarding not models, views, controllers

## Uses domain boundaries

- as module boundaries, units of deployment

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# CUPID applied

Lens for **assessing** a codebase

Basis for a **Code Critique**

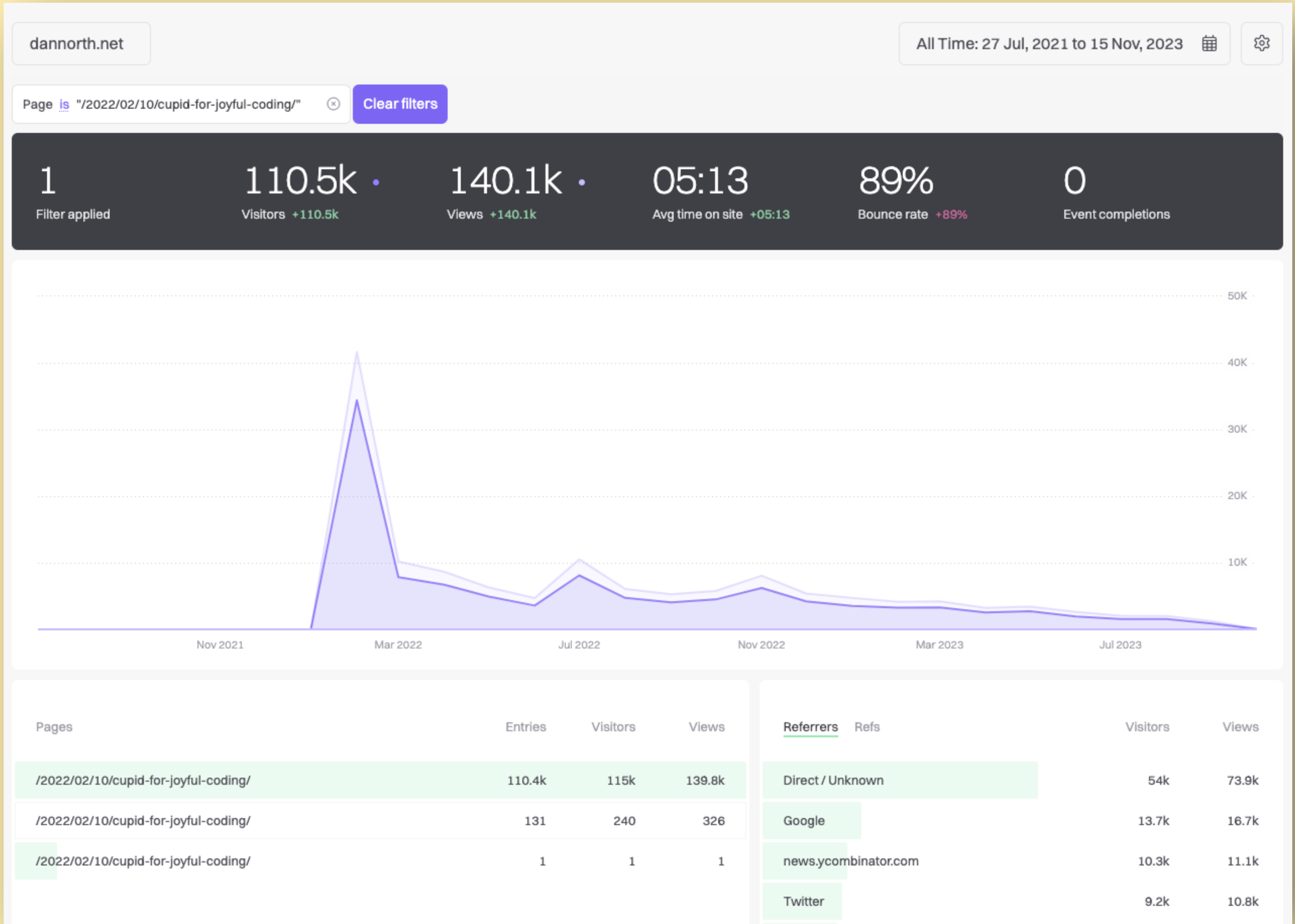
Deciding **where to start** with scary legacy code

**Syllabus** for a programming course

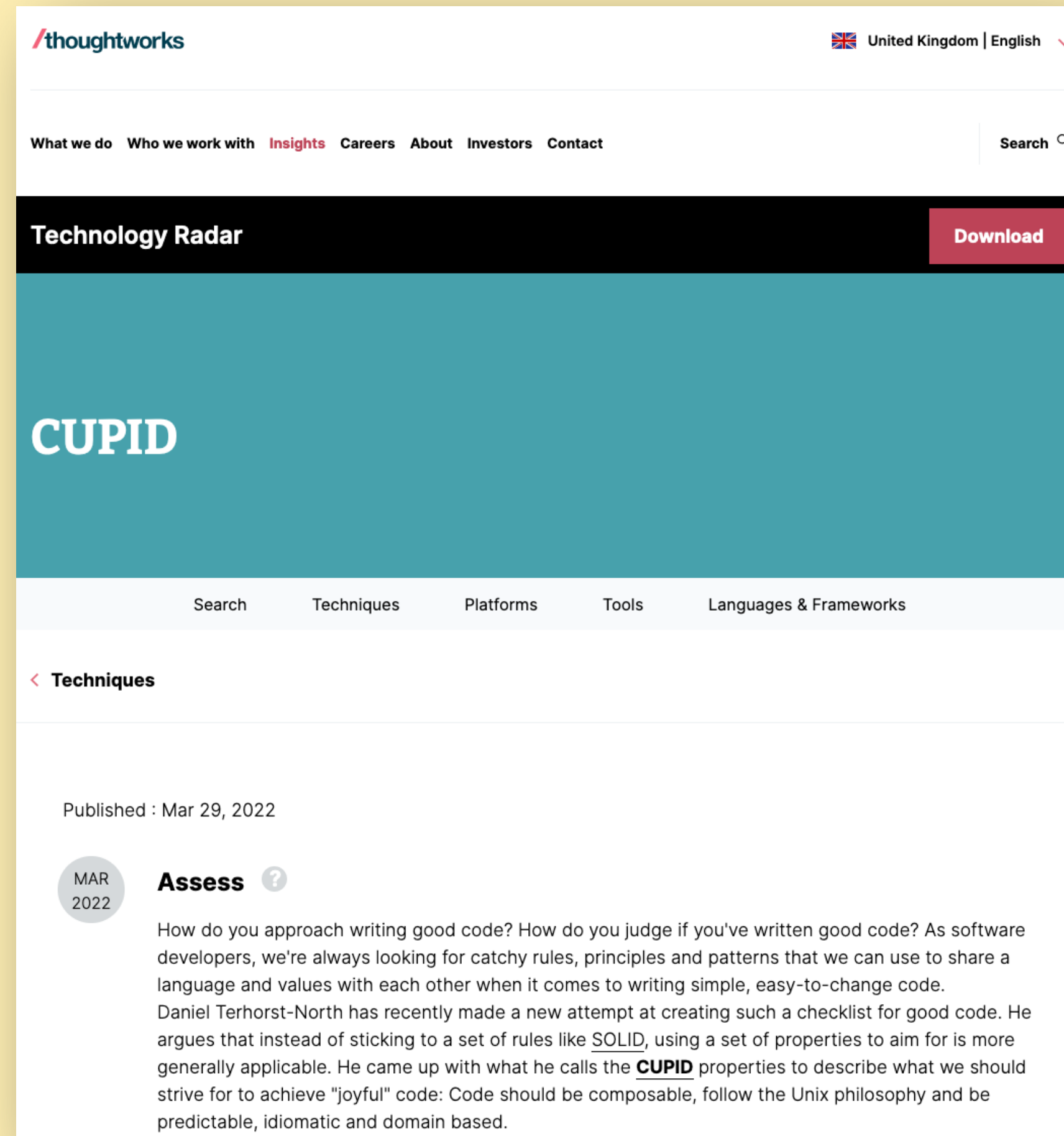
# One(ish) year later...



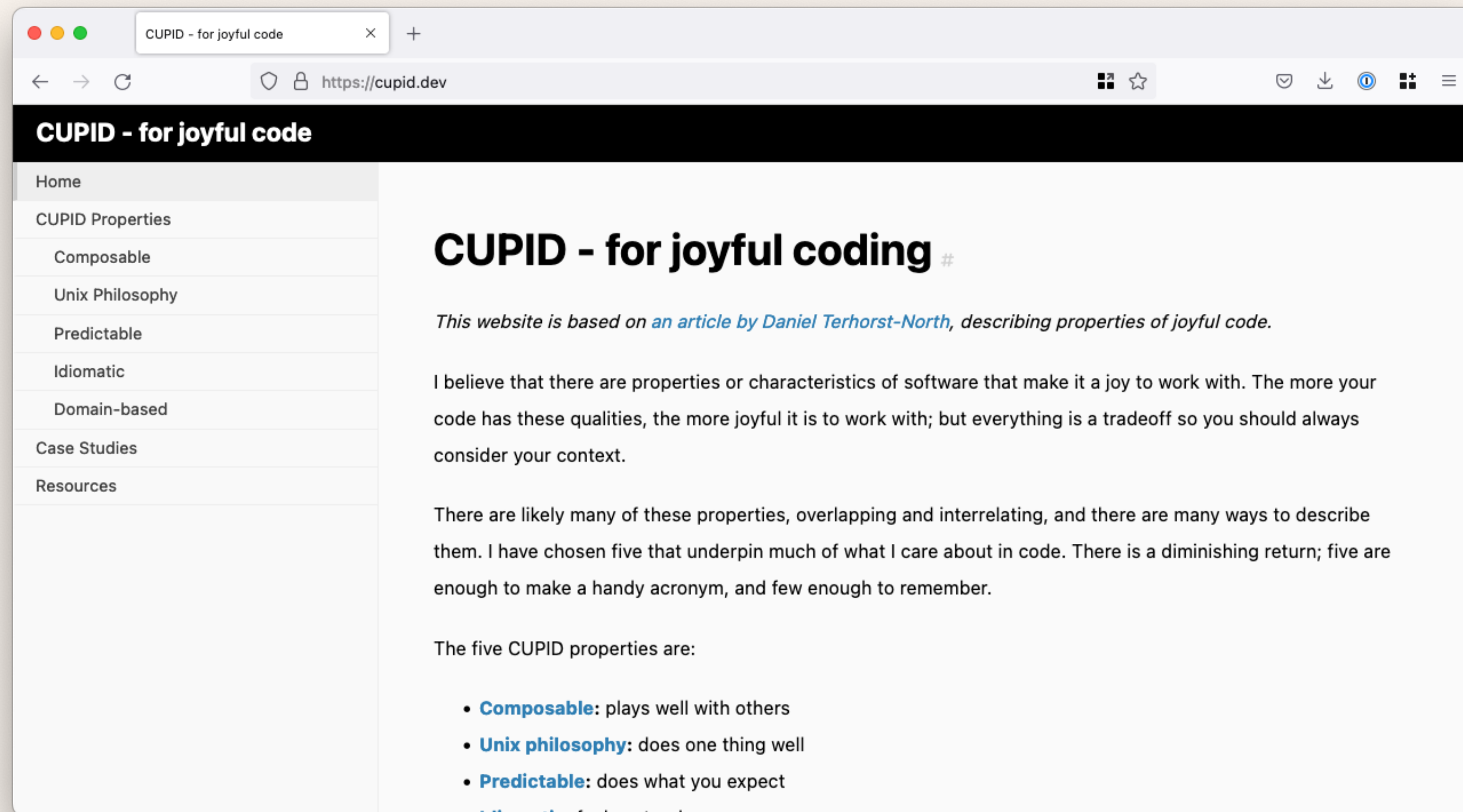
# Spiky traffic is spiky!



# Literally on the radar



# ...and we're live! – cupid.dev



Join us at <https://groups.io/g/cupid-joyful-code>

# Share your stories!

<https://groups.io/g/cupid-joyful-code>

<https://goalwards.co>

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