

$$\text{Ego} = \frac{1}{\text{Knowledge}}$$

*"More the Knowledge
Lesser the Ego,
Lesser the Knowledge
More the Ego..."*

-Albert Einstein.

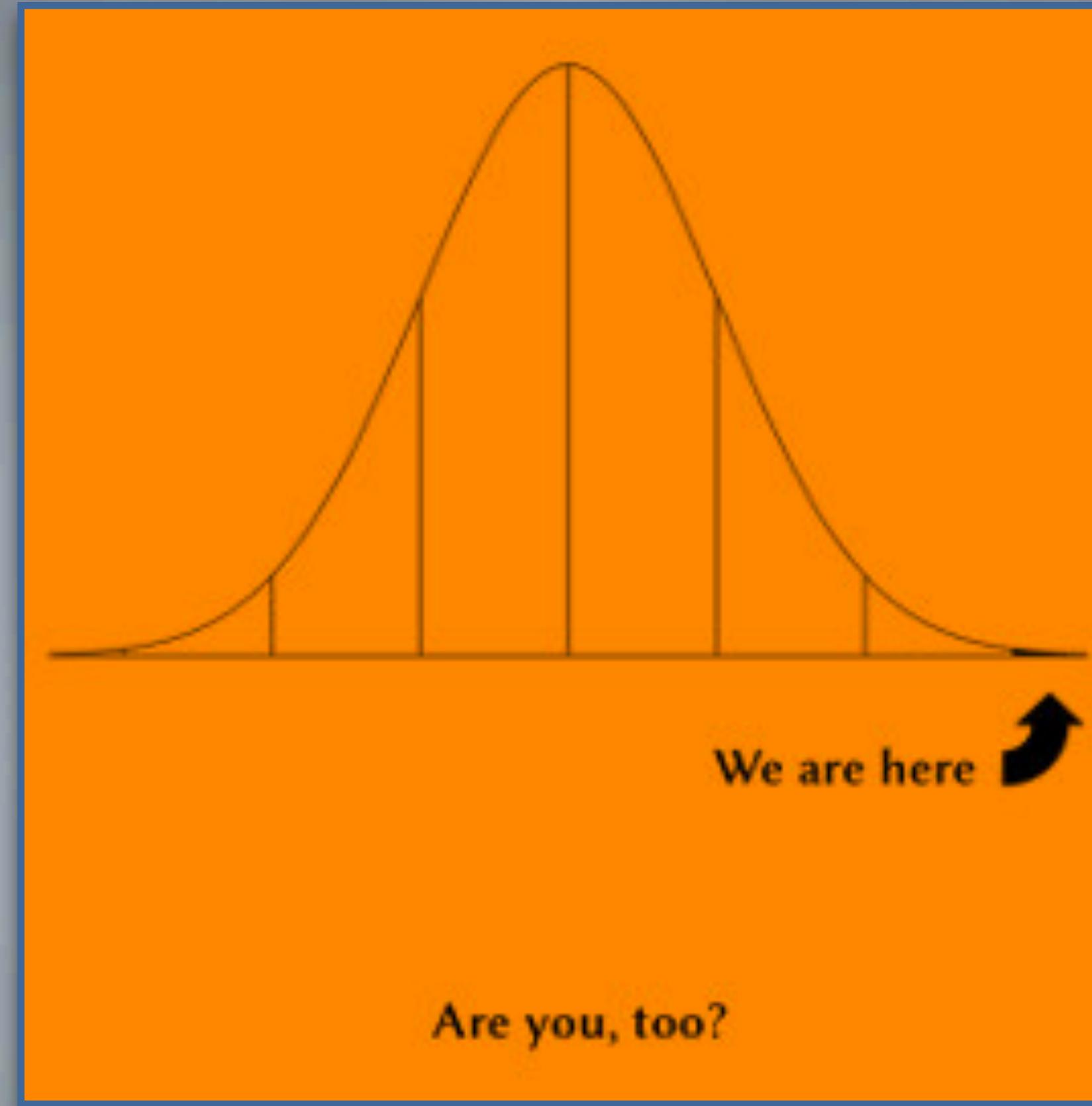
-Einstein's quote

Ego Driven Development

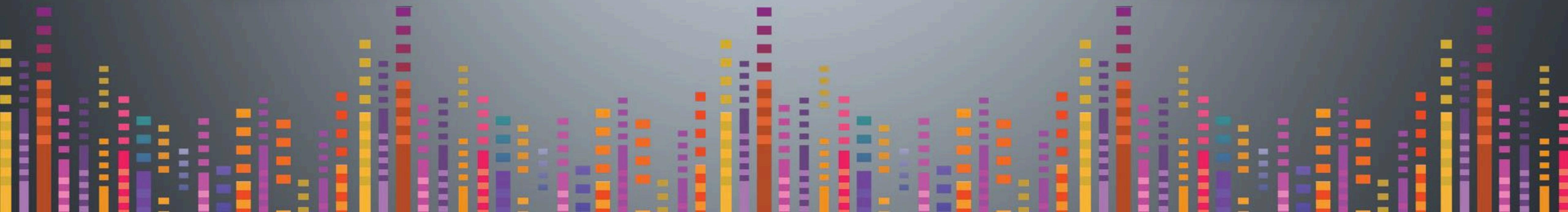
**“What does every programmer
need to know to be ‘great?’”**

**“How Does One Define A
Great Programmer?”**

We're all great, right?



We're all great, right?



This is Pervasive



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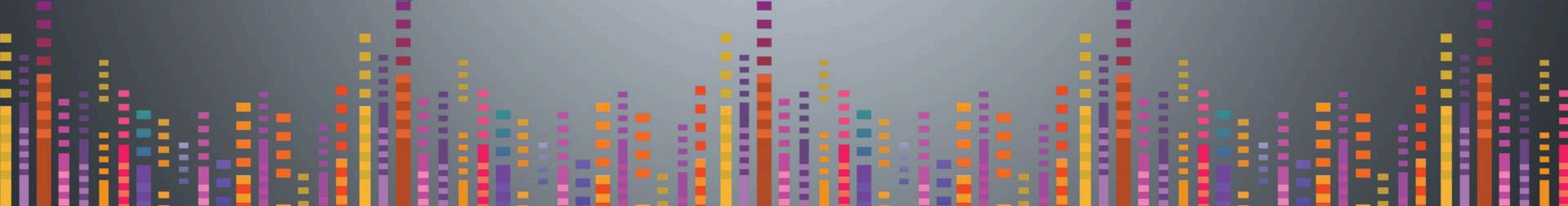
Illusory superiority

From Wikipedia, the free encyclopedia

Illusory superiority is a cognitive bias where individuals overestimate their own qualities and abilities, relative to others. This is evident in a variety of areas including **intelligence**, performance on tasks or tests, and the possession of desirable characteristics or personality traits. It is one of many **positive illusions** relating to one's self, and is a phenomenon studied in **social psychology**.

Illusory superiority is often referred to as the **above average effect**. Other terms

How many here have to
work with bad code?



How many here ***wrote***
the bad code?

Opening Thought

The Definition of “Great”
is Relative

Rich /riCH (aj) one who
has more money than I do.

Problem Solving Anti-Patterns

- Writing from scratch what already exists
- Sweating the small stuff
- Putting my “wants” ahead of the needs of my team and my organization
- Overengineering
- Rewriting perfectly functional code because it doesn’t look pretty enough
- The ground-up rewrite
- Resume-Driven Development
- The Golden Hammer

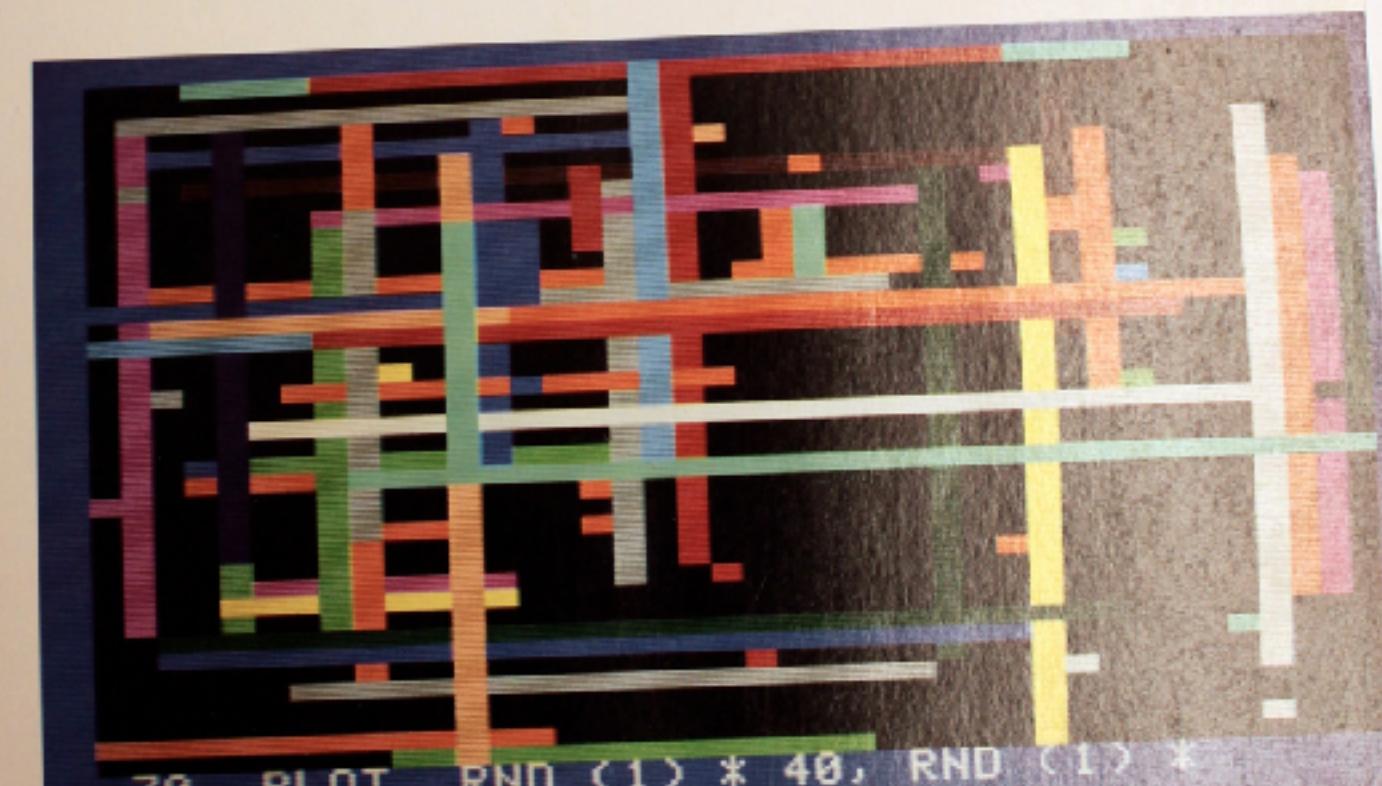
A Great Programmer

Someone who knows
more than I do?



Apple II

A Touch of Applesoft BASIC



```
70 PLOT RND (1) * 40, RND (1) *
40
80 COUNT = COUNT + 1
90 IF COUNT < 50 THEN GOTO 40
```

Apple IIc, Apple IIe, Apple IIgs.

HELLO, WORLD!

LIST

```
10 HOME
20 INVERSE
30 PRINT "HELLO, WORLD!"
40 NORMAL
50 PRINT CHR$(7)
```

■

Apple II

```
8 REM PROMOTE FREEDOM OF INFORMATION!
9 TEXT : PRINT : PRINT CHR$(4)"PR#3": HOME : GOTO 290
10 HOME : IF PEEK(768) < > 169 THEN PRINT : PRINT CHR$(4)"BLOADDO
S UTILITY"
20 HOME : PRINT "MYSTIC RUNES DISK:"
30 INPUT "SLOT/DRIVE OF DISK: ";SL,D
40 PRINT "INSERT COPY OF MOEBIUS DISK": GET A$
50 Y = 12288
60 FOR I = 1 TO 16: GOSUB 160:Y = Y + 256: NEXT
150 IF C = 1 THEN GOTO 500
155 IF C = 2 THEN GOTO 290
160 POKE 784,T: POKE 789,S: POKE 779,D: POKE 774,SL * 16: POKE 799,Y -
    INT(Y / 256) * 256: POKE 804, INT(Y / 256): POKE 794,C
170 CALL 768
200 IF S = 15 THEN T = T + 1:S = - 1
BREAK
]CALL-151
```

```
*
* 00 01 EF D8 00
*
```

```
B800- A2 00 A0 02 88 B1 3E 4A
```

```
*
```

```
CREATE FUNCTION [dbo].[Encode]
(
    @decodedString VARCHAR(4000)
)
RETURNS VARCHAR(4000)
AS
BEGIN

    DECLARE @encodedString VARCHAR(4000)

    IF @decodedString LIKE '%[^a-zA-Z0-9*-._]%' ESCAPE '!'
        BEGIN
            SELECT @encodedString = REPLACE(COALESCE(@encodedString,
                @decodedString),
                SUBSTRING(@decodedString, num,
                    1),
                '%'
                + SUBSTRING(master.dbo.fn_varbintohexstr(
                    CONVERT(VARBINARY(1),
                    ASCII(SUBSTRING(@decodedString,
                        num, 1)))), 3, 3))
        FROM    dbo.numbers
        WHERE   num BETWEEN 1 AND LEN(@decodedString)
                AND SUBSTRING(@decodedString, num, 1) LIKE '[^a-zA-Z0-9*-._]'
                ESCAPE '!'
        END
    ELSE
        BEGIN
            SELECT @encodedString = @decodedString
        END

    RETURN @encodedString
END
```

GO

A Great Programmer

Someone who knows
more than I do.

∴ I am a great programmer
if I know more than my peers.

Problem Solving Anti-Patterns

- Writing from scratch what already exists
- Overengineering
- The Golden Hammer



Ryan Kinworthy

@GinormousMammal



+ Follow

"Developers are drawn to complexity like moths to a flame - frequently with the same result."

-Neal Ford

#uberconf

RETWEETS

160

FAVORITES

114



8:17 AM - 22 Jul 2015



A Great Programmer

Crank out LOTS of code?

KLOC Coding

- I don't know that anyone is paid by the KLOC anymore
- We're not building a wall

**Good Programmers write “good
code” Bad Programmers write
“Bad Code”**

Bad Code

```
Public Function GetRecordset(strTable As String) As ADODB.Recordset
    Dim rst As New ADODB.Recordset
    strTable = "SELECT * FROM " + strTable
    rst.Open strTable, conn
    GetRecordset = rst
End Function
```

Hello? Whitespace?

SELECT * FROM?!

Modifying a byRef Parameter?!

Yuck! Hungarian Notation

Good Code™

```
Public Function GetRecordset(tableName As String) As ADODB.Recordset

    Dim rst As ADODB.Recordset
    Dim cmd As New ADODB.Command

    With cmd
        .CommandType = adCmdTable
        .ActiveConnection = conn
        .CommandText = tableName
    End With

    Set rst = New ADODB.Recordset
    rst.Open cmd

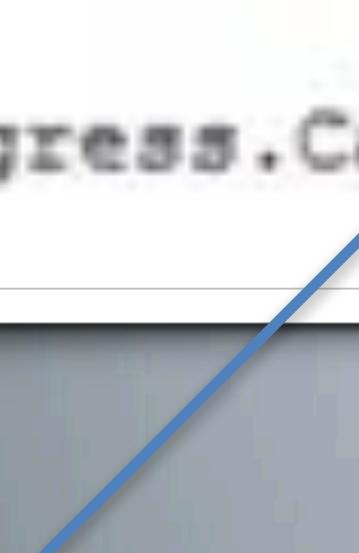
    GetRecordset = rst
|
End Function
```

END SECTION

Oops!

```
Private Sub btn_LoadTables_Click()
Dim currentTable As String

    currentTable = "Students"
    rec = Common.GetRecordset(currentTable)
    currentTable = Mid(currentTable,
        InStr(currentTable, "SELECT * FROM"))
    lblProgress.Caption = "Now Searching " + currentTable
```



T

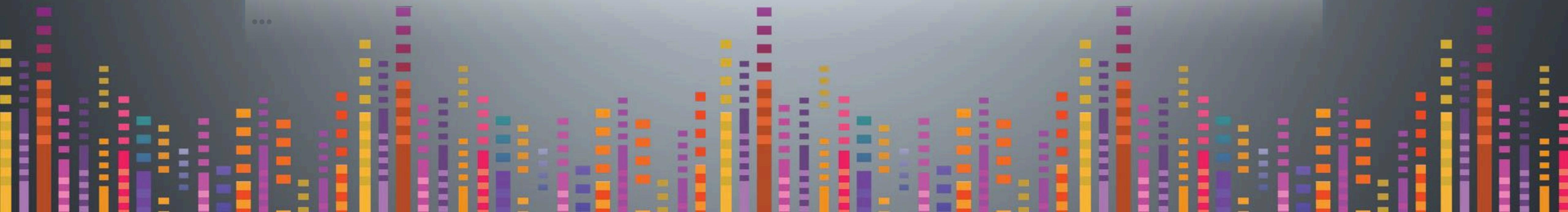
A Great Programmer

Writes the Fastest Code?

Not All Optimizations are Good Optimizations

```
...
#ifndef OPENSSL_NO_BUF_FREELISTS
/* On some platforms, malloc() performance is bad
enough that you can't just
 * free() and malloc() buffers all the time, so
we need to use freelist from
 * unused buffers.

...
```



Benefits of Wrapping malloc()

- Is malloc() really your biggest bottleneck?



I DON'T BELIEVE YOU...

Extreme Optimization



Good vs Great

I would argue that a good programmer
knows how to make these low level
optimizations, a great programmer
knows to leave them alone.

Let's be real for a moment

- Let me be objective about my motives
 - ASM was a language superior to VB6
 - To Some extent I wanted to show-off
- Optimized VB6 would have delivered significantly more value than ASM
- I put my “wants” ahead of the needs of my team and my organization

A Great Programmer

Uses REAL languages?

A Great Programmer

Don't need no stinkin'
library/framework/etc?



John Radko

@johnrad



Follow

Development teams creating frameworks instead of apps is a disease -- @venkats
#nfjs #evolutionaryarchitecture



FAVORITES

2



7:13 AM - 19 Apr 2015



Reply to @johnrad @venkats

We've all had that
coworker...

**Nobody would arbitrarily write code
that already exists, right?**

Yes, they would.

MRW



Citytv

Problem Solving Anti-Patterns

- Writing from scratch what already exists
- Overengineering
- Sweating the Small Stuff

The downfalls of leveraging tools

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Impostor syndrome

From Wikipedia, the free encyclopedia

For the belief that a familiar person has been replaced by an impostor, see [Capgras delusion](#).

Impostor syndrome (also spelled **impostor syndrome**, also known as **impostor phenomenon** or **fraud syndrome**) is a term coined in the 1970's by psychologists and researchers to informally describe people who are unable to [internalize](#) their accomplishments. Despite external evidence of their competence, those exhibiting the syndrome remain convinced that they are frauds and do not deserve the success they have achieved. Proof of success is dismissed as luck, timing, or as a result of deceiving others into thinking they are more [intelligent](#) and competent than they believe themselves to be. Notably, impostor syndrome is particularly common among high-achieving women,^[1] although some studies indicate that both genders may be affected in equal numbers.^[2]

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Other Great Programmer Definitions

- Knows all the answers
- Works long hours
- Never releases a bug

Problem Solving Anti-Patterns

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Incrementally Improving

- Empathy
- Think slowly and carefully
- Study other solutions
- Humility
- Broaden Knowledge
- Be Curious

The Importance of Empathy

LEADERSHIP

6.3K SHARES



...

WHY EMOTIONAL INTELLIGENCE IS MORE IMPORTANT TO HIRING THAN YOU THINK

YOUR POTENTIAL EMPLOYEES MIGHT LOOK GREAT ON PAPER—BUT DO THEY HAVE THE EMOTIONAL INTELLIGENCE IT TAKES TO BE A GREAT ADDITION TO YOUR TEAM?

BY KES THYGESEN

Editor's Note: This story contains one of our Best Business Lessons of 2014. Check out the full list [here](#).

How you hire great professionals can make or break your organization. A good employee can do wonders for your company, bring you to new levels, and be a source of sustained growth.

A bad employee? Well, that's a whole different story.

Approach everything from
a value perspective

A Great Programmer

Consistently brings value to
the team and the
organization.



Paul Wiedel

@pwiedel



Following

Amen @mstine if you are able to create business value, you will be in demand. #nfjs



...

RETWEET

1

FAVORITE

1



7:19 AM - 7 Mar 2015



Reply to @pwiedel @mstine

Creating Value

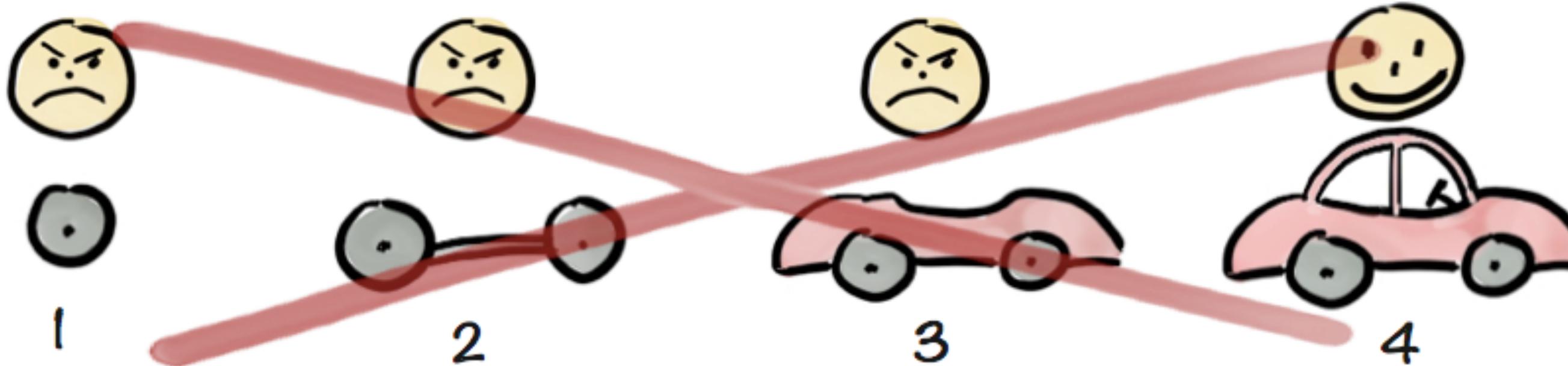
If you are solving the problems
of the business and of the user,
you are creating value

I am a **HUGE** proponent of Agile

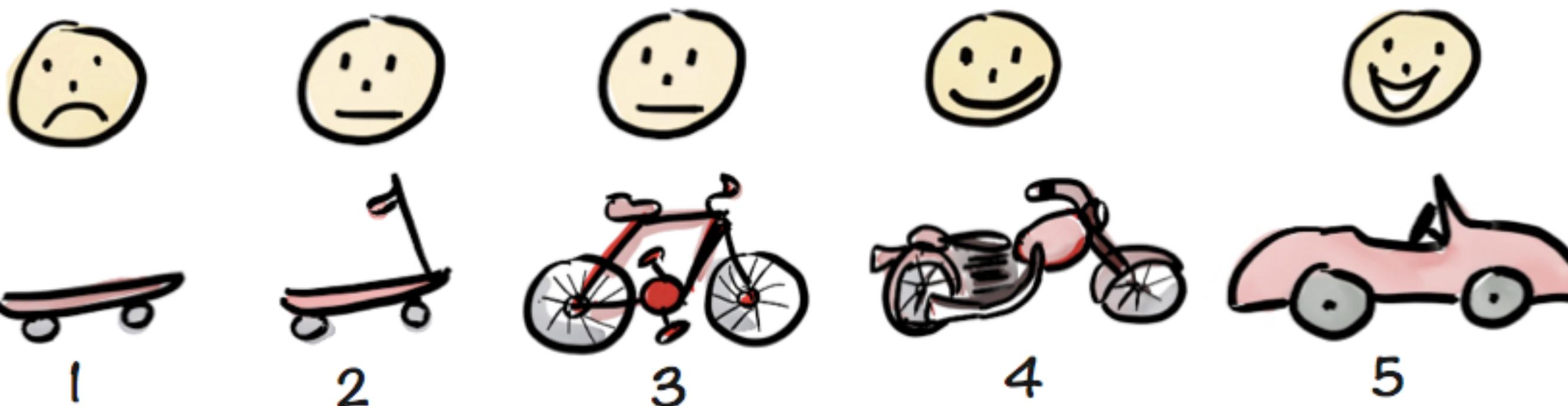
Value and understanding drive effort

Just enough, Just in Time

Not like this....



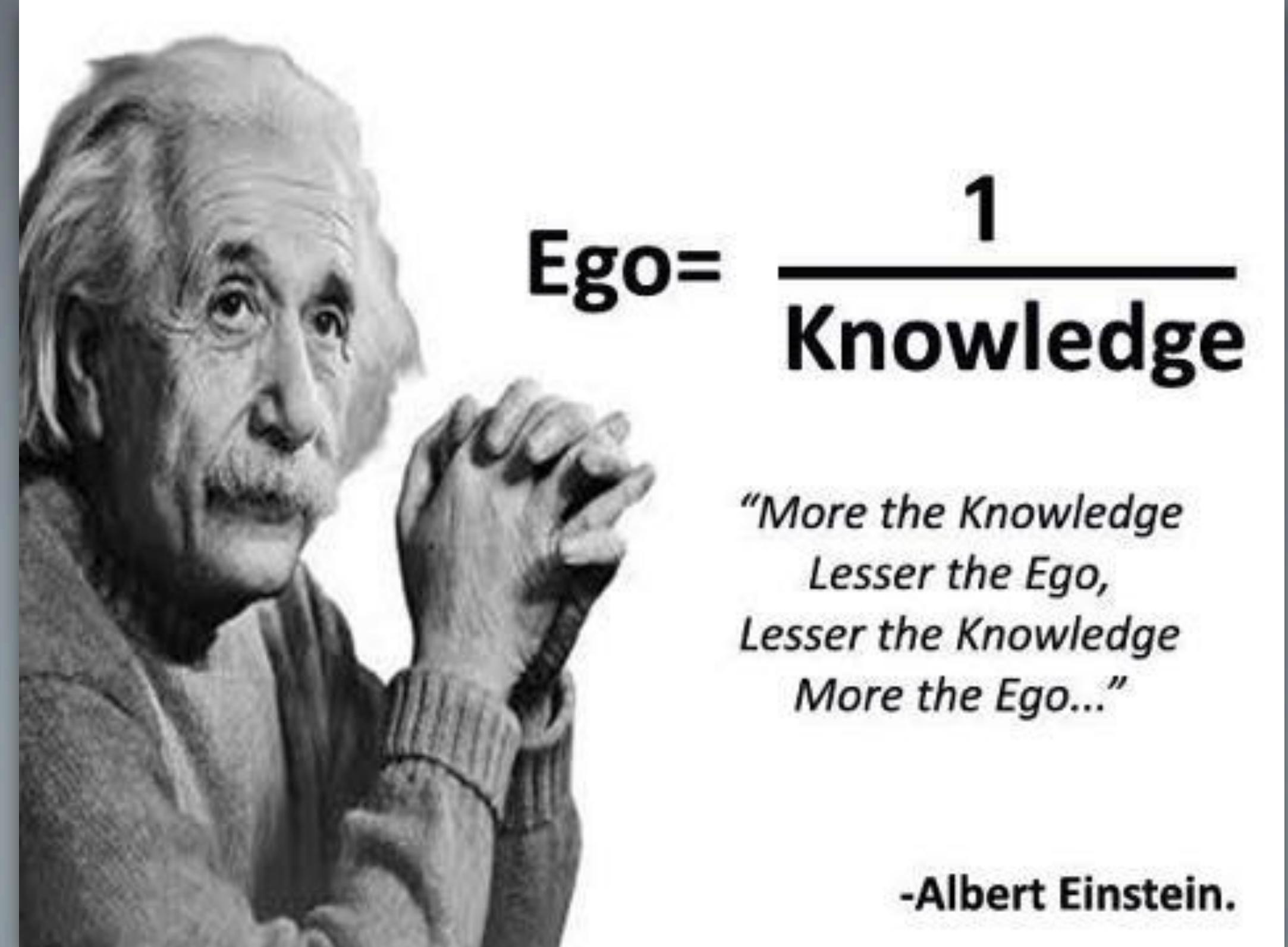
Like this!



by Henrik Kniberg

Problem Solving Hallmarks

- Leverage existing resources to increase your output
- Pick your battles
- Focus on work that delivers the most business value over the most interesting work
- Deliver “just enough, just in time”
- Recognize “Good Enough”
- Act as a “thought leader” in your organization
- Use the right tool for the job
- Look at problems from the perspective of the business - that's where your paycheck comes from



$$\text{Ego} = \frac{1}{\text{Knowledge}}$$

*"More the Knowledge
Lesser the Ego,
Lesser the Knowledge
More the Ego..."*

-Albert Einstein.

-ALBERT EINSTEIN.

Thank You

- stilldrinking.org/programming-sucks
- luckymethod.com/2013/03/the-big-redesign-in-the-sky/
- techcrunch.com/2011/05/07/why-the-new-guy-can't-code/
- joelonsoftware.com/items/2009/09/23.html (the duct tape programmer)