

TRANSFORMATION INTO 3D



- WHO AM I
- UNDERSTANDING THE R'S
- WHY 3D
- XR AND EDUCATION
- JOBS IN XR

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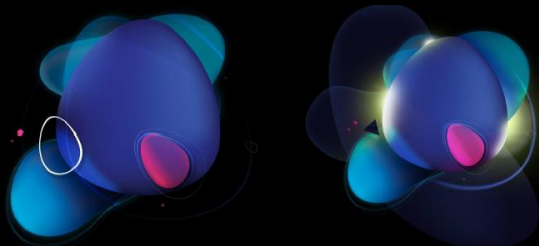
WHO AM I

Principal Design Manager at Microsoft, author, researcher and storyteller.

I have been focused on 3D experiences and extended reality (XR) for ten plus years and innovating with technology for over twenty years.

My true passion is to invent using true stories, to design through experimentation, and to create products that **empower others to imagine what is possible.**





TYPOGRAPHY - UNIT
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 Body copy for content



BILLY'S BIRTHDAY PARTY

DATE
LOCATION
FOCUS ON



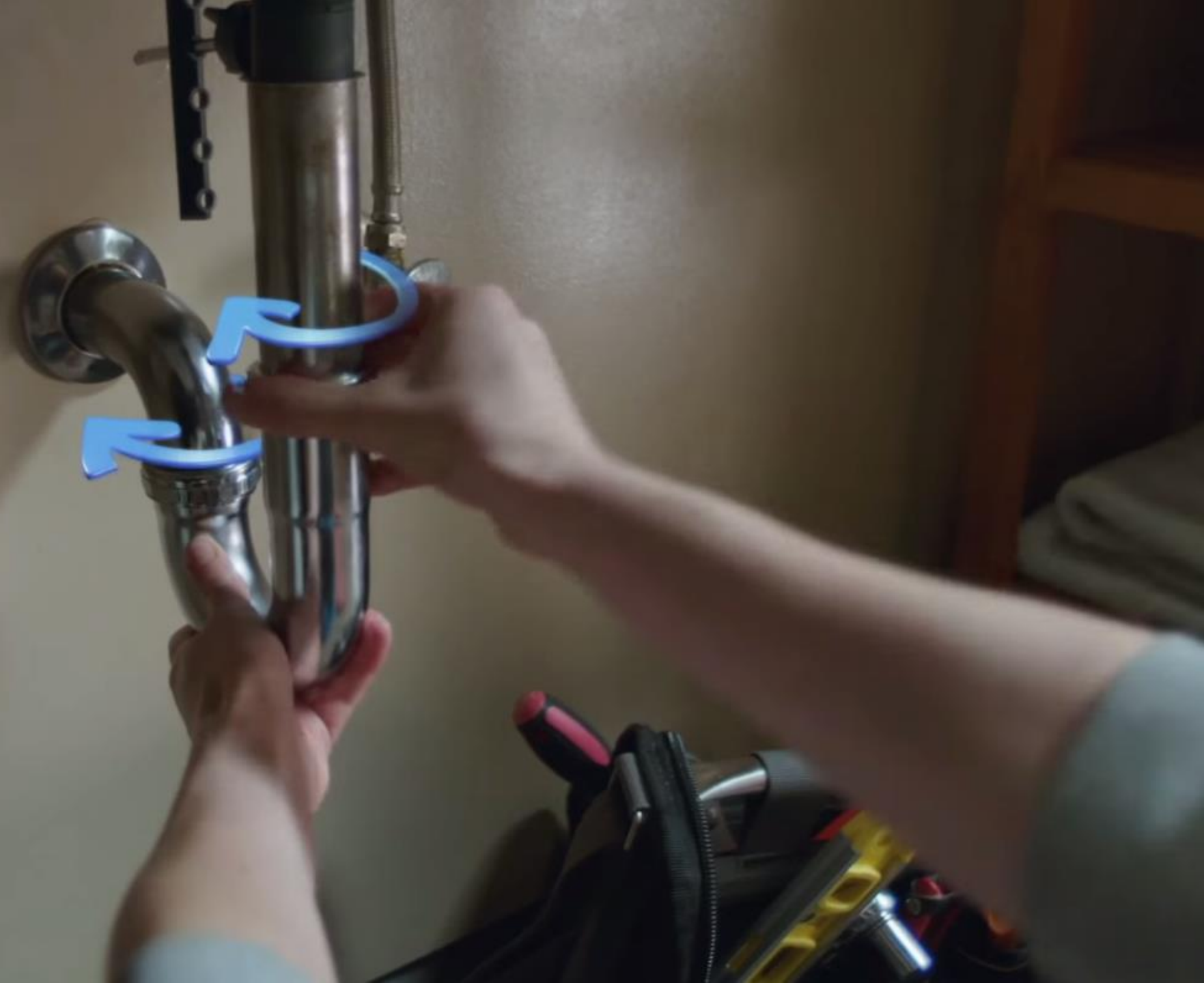
SAVE





“I felt as though I had jumped into the driver’s seat without knowing how to drive the car.”

— Hae Jin Lee







skype™







RapCaviar

RapCaviar

By Spotify

We celebrate 4/20 with Wale & Fetty Wap reveals his "Top 5" Air Jordans.

50 SONGS

PLAY

FOLLOW ...

1. **DNA.**
Kendrick Lamar · DAMN.
2. **Mask Off**
Future · FUTURE
3. **Up**
NAV · NAV
4. **XO TOUR Llif3**
Lil Uzi Vert · XO TOUR Llif3
5. **Portland**
Drake, Quavo, Travis Scott · More Life
6. **HUMBLE.**
Kendrick Lamar · DAMN.
7. **Drowning (feat. Kodak Black)**
A Boogie Wit da Hoodie, Kodak Black · Drowning (feat. Kodak Black)
8. **Tunnel Vision**
Kodak Black · Painting Pictures
9. **Peek A Boo**
Lil Yachty, Migos · Peek A Boo



← Fuel Injection System
Regulator line installation

Place the regulator line in position at the inlet and outlet ports.

Attach the regulator line to both ports simultaneously using the captured threaded collars on the line.

Step 11 of 15

The image shows a woman in a white lab coat and safety glasses working on an engine in a factory. A digital instruction overlay is visible, providing step-by-step guidance for installing a fuel injection system regulator line. The overlay includes a back arrow, the title 'Fuel Injection System' and subtitle 'Regulator line installation', two paragraphs of instructions, and a progress indicator 'Step 11 of 15'. The instructions are: 'Place the regulator line in position at the inlet and outlet ports.' and 'Attach the regulator line to both ports simultaneously using the captured threaded collars on the line.' The background shows a factory setting with metal shelves and equipment.



UNDERSTANDING THE R'S

Talking the same language

Everyone, and I mean EVERYONE, in the industry is using different names and different terms for 3D technology. Even now, as I am writing this, I keep checking that someone hasn't created another set of terms or that one or the other name hasn't fallen out of favor or suddenly risen in popularity.

THE SPECTRUM
XR
EXTENDED REALITY

PHYSICAL REALITY DIGITAL REALITY



AR
AUGMENTED REALITY

MR
MIXED REALITY

VR
VIRTUAL REALITY

Digital content shown in real world through a screen

Environmentally aware digital interactions in the physical world

Entirely simulated environment



Any AR enabled mobile device

Google Glass

Microsoft HoloLens 2

Oculus Quest 2

Examples



WHY 3D

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WE ABSORB MORE DATA IN THREE DIMENSIONS

HARD-CODES OUR MEMORIES IN SPATIAL AWARENESS.



**SPEEDS UP OUR
UNDERSTANDING
HELPS US MAKE
DECISIONS FASTER**



WHY 3D

CONTINUE THE CONVERSATION IN REALITY – READ EMOTIONS

The background features a gradient from blue on the left to orange on the right. Two large, thin white circles are centered on the page. On the left and right sides, there are decorative symbols: a plus sign, a solid dot, and an open circle, arranged vertically.

XR + EDUCATION

What's going on

**THE RESEARCH COMPANY
SUPERDATA RESEARCH REPORTS
THAT ANNUAL VR REVENUES IN
2018 REACHED \$3.6 BILLION.**



A futuristic landscape with a glowing path leading towards a bright light source. A large, dark red planet with glowing spots is on the left. A smaller planet with a bright, glowing core is on the right. The scene is set against a dark, starry sky with a purple and blue color palette.

**VR IN EDUCATION
IS PREDICTED TO BE
A \$700 MILLION
DOLLAR INDUSTRY
BY 2025.**

**EDUCATION IS
EXPECTED TO BE THE
4TH BIGGEST SECTOR
FOR VR INVESTMENTS.**



97% OF STUDENTS WOULD LIKE TO STUDY A VR COURSE

ALMOST 80% OF
TEACHERS HAVE
ACCESS TO VIRTUAL
REALITY DEVICES, BUT
ONLY 6.87% USE THEM
REGULARLY IN THE
EDUCATIONAL PROCESS.



**93% OF TEACHERS SAID
THAT THEIR STUDENTS
WOULD BE EXCITED TO
USE VIRTUAL REALITY.**

**7 OUT OF 10 TEACHERS WANT TO USE
VR TO SIMULATE EXPERIENCES THAT
ARE RELEVANT TO THE MATERIAL
COVERED IN CLASS.**





THE CURRENT STATE OF XR JOB MARKET

What's going on



WHEN I STARTED, MIXED REALITY DIDN'T EVEN HAVE A NAME.

THERE WERE NO RULES, GUIDANCE, OR SUPPORT BACK THEN.

We are starting to have work that we can build off of and courses we can take to learn.

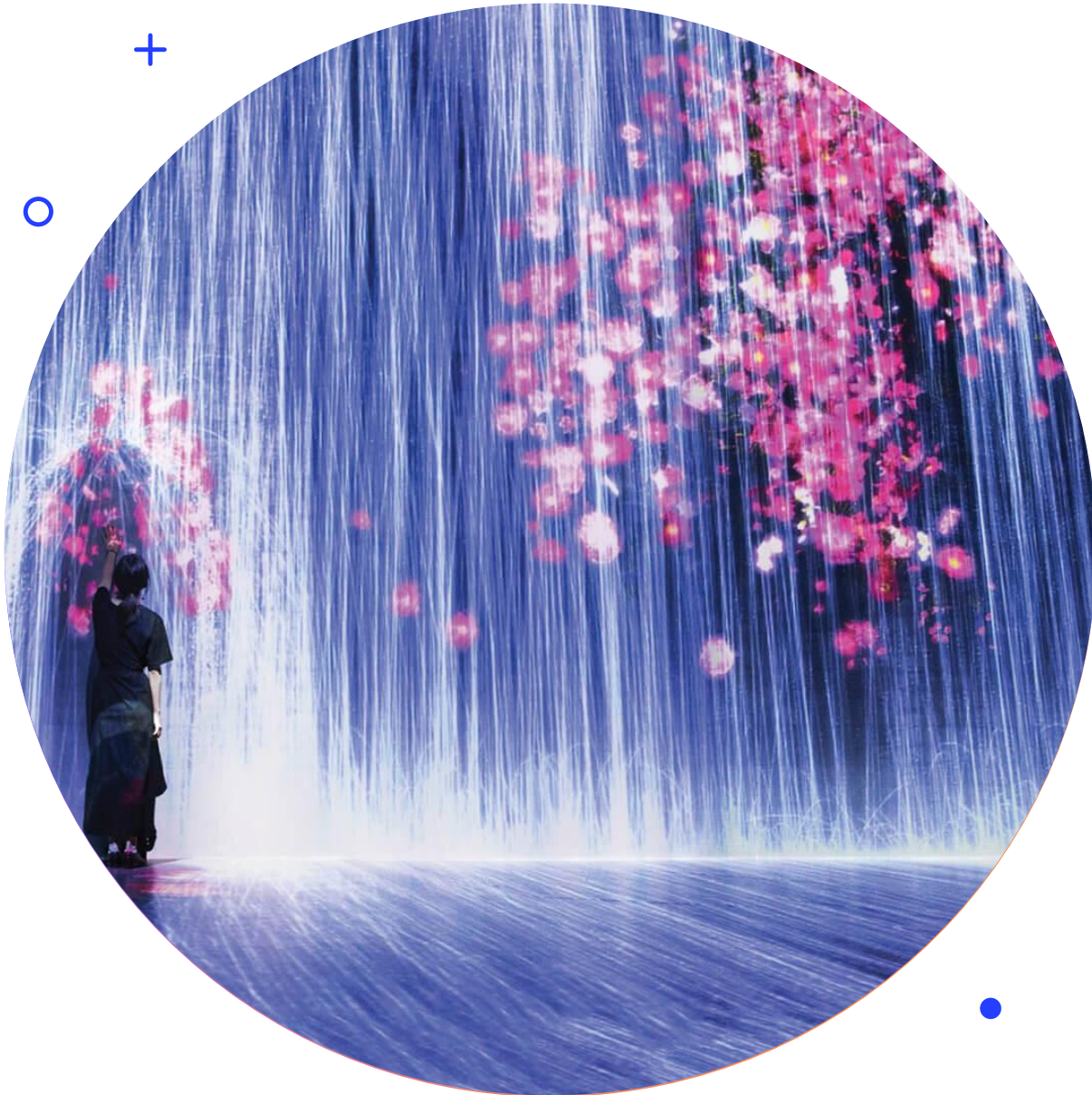
The industry is looking to hire qualified candidates and they are having a challenging time filling the roles.



QUALIFIED CANDIDATES ARE SCARCE

Historically, the designers for VR and AR, have come from the Games industry, making this small industry fragmented by the addition of these platforms.

The demand in the Games industry for Unity, Unreal and other engine programmers has always been high. To compound this exponentially increasing demand, new companies are fighting to bring candidates into AR& VR, creating a scarcity of talent and making hiring all that more problematic.



TALENTED CANDIDATES HAVE ALREADY BEEN PLACED IN POSITIONS

As is often the case in a small industries the top talent is tied up in the companies that have massive budgets.

Startups or smaller companies compete to bring in quality candidates.



**HOW DO WE HELP
THE COMMUNITY
TRANSFER THEIR
KNOWLEDGE FROM
2D TO 3D?**



Upskill the industry not only to engineering but to designers and other disciplines.

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Give the education to students across all disciplines to help them have context to this new world.

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Bring awareness to industry on the value that XR brings to feed the tremendous curiosity. Show its value.

A woman with curly hair, wearing a VR headset and a dark jacket, is smiling and looking towards the camera. She is in a dark environment illuminated by vibrant neon lights in shades of red, blue, and purple. The background features geometric shapes and lines, suggesting a virtual or futuristic space. The overall mood is immersive and joyful.

If you don't experience it,
you can't have empathy and
therefore can't design for it.

SUMMARY

We as a community need to focus on not just designing the features but designing the experiences for these new worlds.

3D and thinking in 3D will be a crucial skillset for not only engineering but designers, teachers, project managers – the product teams in their entirety.

It will become the new normal to expect anyone and everyone to be able to think this way – think in 3D.



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THANK YOU

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