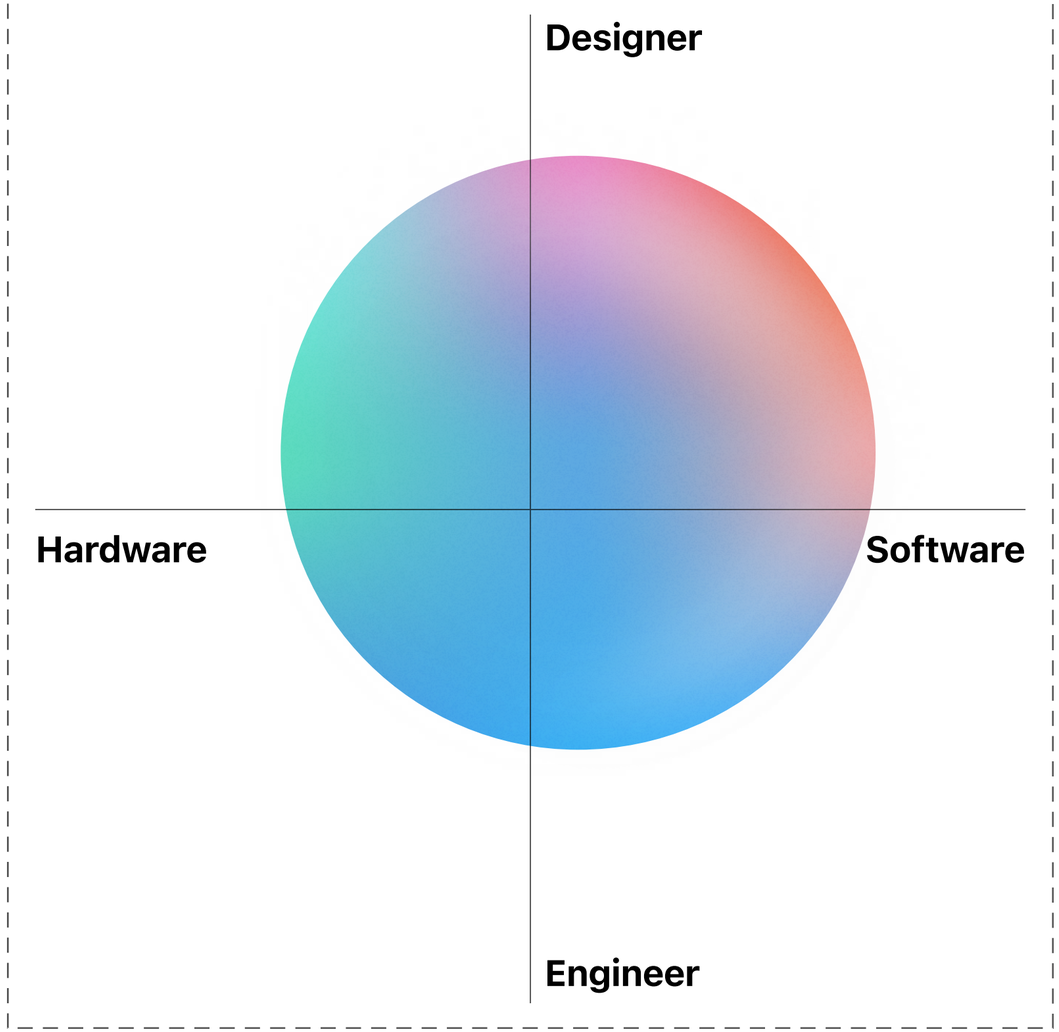
Vidit Bhargava

Education Portfolio

I bring my understanding of technology, design, engineering and a visuals focused approach of breaking down complex concepts into something easily understandable items.

MY SKILLS ARE THE MULTI COLOURED BUBBLE



Educational Zines

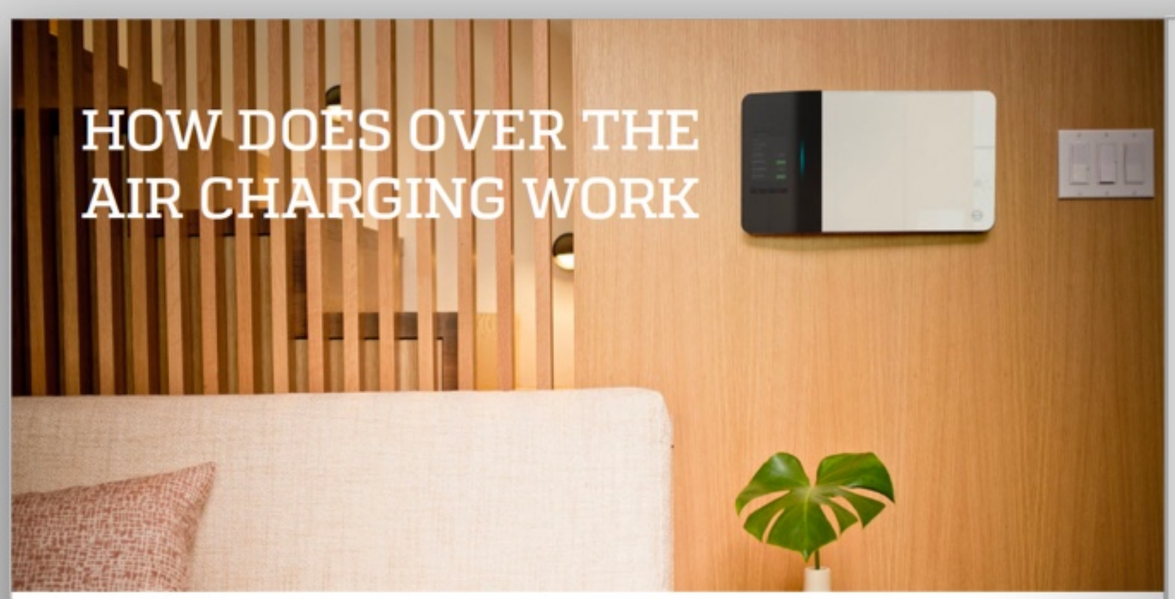
Conferences

Workshops

Educational Zines

Ran a student eZine through high-school and undergrad to educate students on topics of emerging technologies and design.

MVDIT TECH BOOK — July 2007 to February 2019



HOW DOES OVER THE AIR CHARGING WORK

Vidit Bhargava

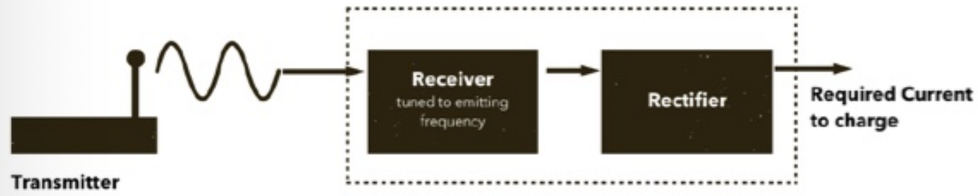
With the number of smart gadgets increasing by the day, Charging them has become a hassle. You need to charge your phones, your computers, watches, et all. at regular time intervals. And the number of wires can be staggering. One solution to this problem is Wireless Charging. Well, not exactly wireless charging but more like Induction + Resonance based Pad Charging. You place your device on a Pad and the device starts charging. These charging pads can be placed into furniture and you basically have a spot in your table where if you were to place your phone, your phone would charge.

But this isn't truly wireless. To begin with, you need contact with a special part of the surface to charge your devices, and secondly, that pad needs to be connected to a power source too, and generally supports a single device. So what you're doing with this kind of wireless charging is just replacing the charging cable with a pad.

What if, you didn't need all the charging paraphernalia? What if charging happened over the air? You plug in a charger. And all your devices in the room start charging, without the need of any cables. Sounds like Science Fiction, and to be honest a little scary too, Most people I've talked to about it, have questioned the sanity of having "electricity through the air". But this is a sort of technology which is on the horizon of becoming popular and more than that, it's just about as safe as WiFi.

Over the Air Charging

While exciting, Over the Air charging is still in a nascent stage, and has been approached at with multiple angles, which vary in their implementation, efficiency and device safety. I'll be discussing three of the popular Over the Air Charging technologies for this piece:



Radio Frequency Charging

The way this works is, Radio Waves are essentially Electromagnetic Waves (much like X-Ray, microwaves and infrared waves). A device (Hub) transmits high frequency radio waves at a fixed frequency. The phone or any other smart device can receive those waves at that fixed frequency and convert the transmitted Alternating EM Wave, to a Direct Current Wave. This is effectively how FM Radio works but instead of data, it's power that the user gets.

Since, the EM Wave propagation attenuates (reduces) over a distance. The closer your device is to the radio wave transmitter, the faster it'll charge.

Is it Safe?

Yes. High frequency radio waves cannot penetrate human skin. And since most of the charging technologies use only the magnetic components of EM Wave, there isn't much of a risk anyway.

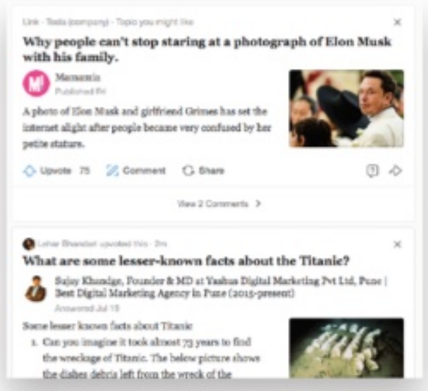
Why is it not taking the world by the storm?

The efficiency is not upto the mark, i.e. it just takes too long to charge the device at the moment. Given, that a lower efficiency isn't much of a concern once your device is consistently charging, but there's another concern around consistent charging. Lithium Ion Batteries only have a limited number of charge cycles they can go through, and if you're consistently charging for long durations, that could adversely affect your device's battery. Also, the efficiency isn't even high enough to charge your phone while you're using it. The charging efficiency i.e. the power it can transmit over

PROMOTED

Disguised Ads

Made to look as part of a navigation or just another form of content, they're instead designed to trick users into clicking them.



Quora

It's hard to separate quora's promotional content that takes the user to a different site, from the user generated content that most users come for.

Take the screenshot on the left as an example. It's hard to figure out which of the two is an advertisement.

Hint: Look for the "*link*" tag.

Image from *darkpatterns.org*

Softpedia

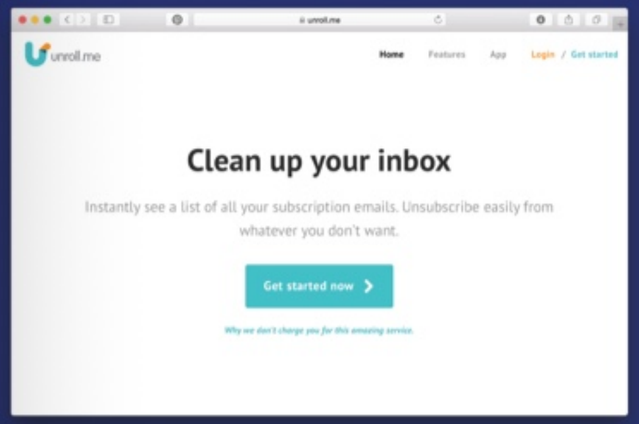
These advertisements are often run on websites that offer you some sort of shareware or free software download. The idea is for you to click the shinier download button. Often that of the advertiser and not the download website

Sponsored Content

Is it news about your favourite tech company? Or is it an advertisement disguised to look like news by the company itself? It's hard to figure out unless you actively look for the "sponsored" tag at the top of the screen.

privacy zuckering

Named after the founder of a social media known to make it easy for you to share your private information. Privacy Zuckering is when a company tricks you into sharing more information about yourself than you intend to.



Unroll me is an internet service that cleans up your inbox and lets you easily unsubscribe from mailing lists. But in exchange of allowing you to unsubscribe from mailing lists easily, unroll me also scans people's inboxes for more private information and then sells that information to data firms.

You didn't intend to, but unwittingly shared a whole lot of your private information. They faced a lot of backlash last year when it was brought to attention that Uber paid Slice Intelligence, a data firm which collected data from Unroll me to keep tabs on its rival Lyft.

Not only does Unroll me access more than what the users would want to share with, they then go on to sell that data.

And you'll probably never know from the website's description that they indulge in such a practice.

The Anatomy of Typefaces

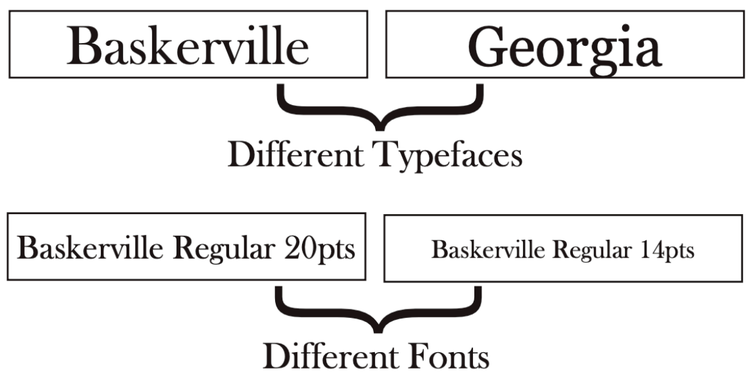
T T T

Serif Sans-Serif Slab-Serif

High x-height: Easier to read when at *lower point sizes* and *low resolution displays*.
Examples: Lucida Bright, Georgia.

Low x-height: Used for shorter forms of text, generally in a manner to display elegance.
Not Recommended for a large amount of text.
Examples: Baskerville

Difference between Typeface and Font



WHAT ARE MILIMETER WAVES?

MILIMETER WAVES
ARE EXTREMELY HIGH FREQUENCY RADIO WAVES

FREQUENCY RANGE: 30-300 GHZ
WAVELENGTH RANGE: 1CM TO 1MM

WIFI
FREQUENCY RANGE: 2.4 - 5 GHZ
WAVELENGTH RANGE: 12 TO 6 CM

FM RADIO
FREQUENCY RANGE: 88 TO 108 MHZ
WAVELENGTH RANGE: 3.4 TO 2.7 M

TELEVISION BROADCAST (VHF)
FREQUENCY RANGE: 41 TO 250 MHZ
WAVELENGTH RANGE: 7.2 TO 1.1 M

TELEVISION BROADCAST (UHF)
FREQUENCY RANGE: 3 TO 30 MHZ
WAVELENGTH RANGE: 99 TO 9.99 M

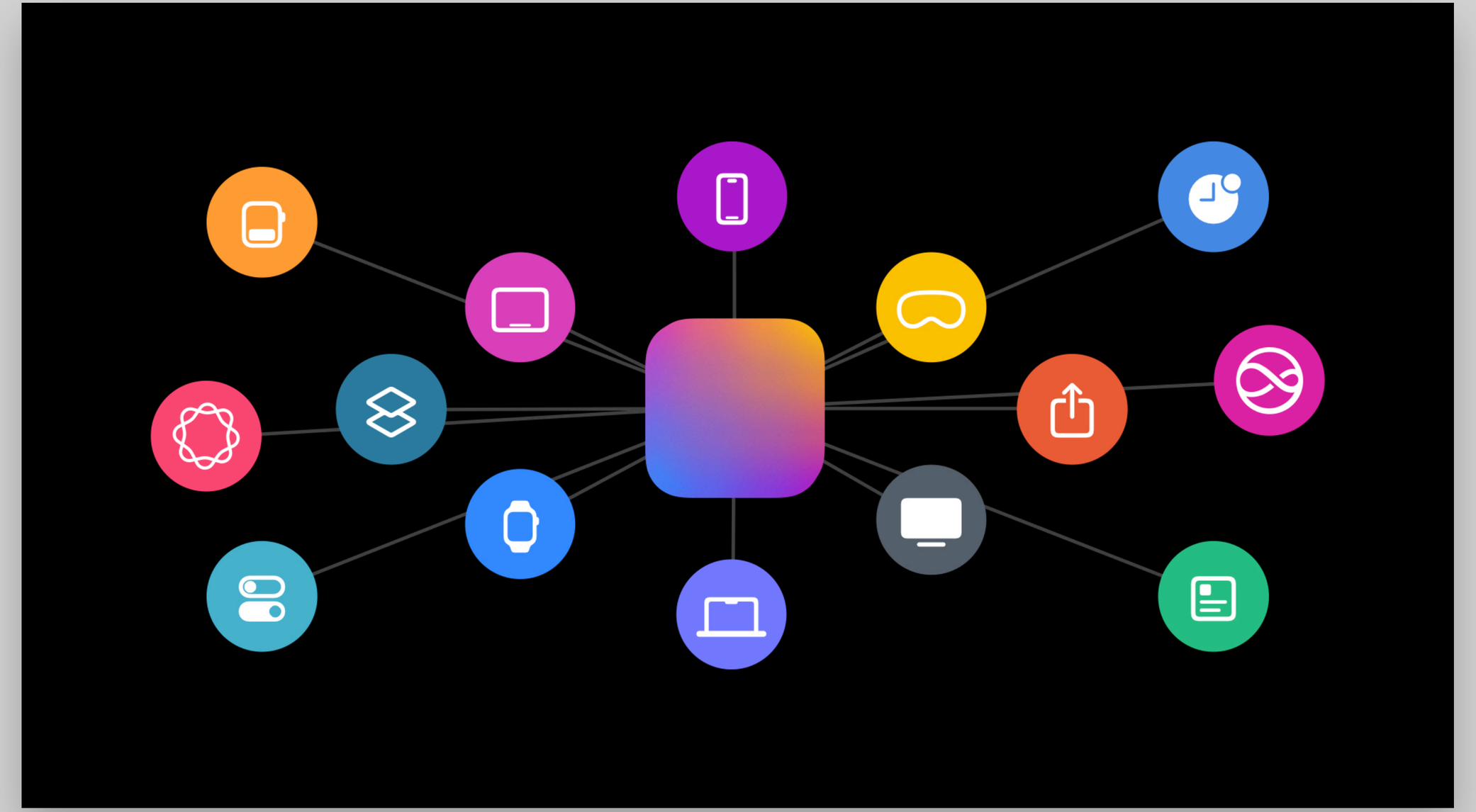
Conference Talks

I have presented at various conferences to talk about my work on design and app development

ARCtic Conference for iOS Developers — March 2025

Presentation: Action Centered Design Framework


Person
Action
Wants & Needs



Grad Student Lecture in Applied Resilience UC Berkeley,
and Conference Talk at DeepDish Swift, Chicago — April 2025

“Pizza Will Save your startup” frameworks for tackling burnout

Recovery

Motivation

Community

Take a step back and appreciate what makes you enjoy it

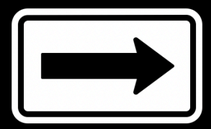
★ Motivation

Workshop Sessions

Conducted Introductory Design workshops through Swift India, Delhi

Today’s Discussion

Consistency

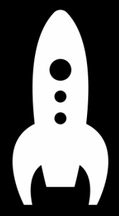


Navigation

Clarity

Aa

Typography



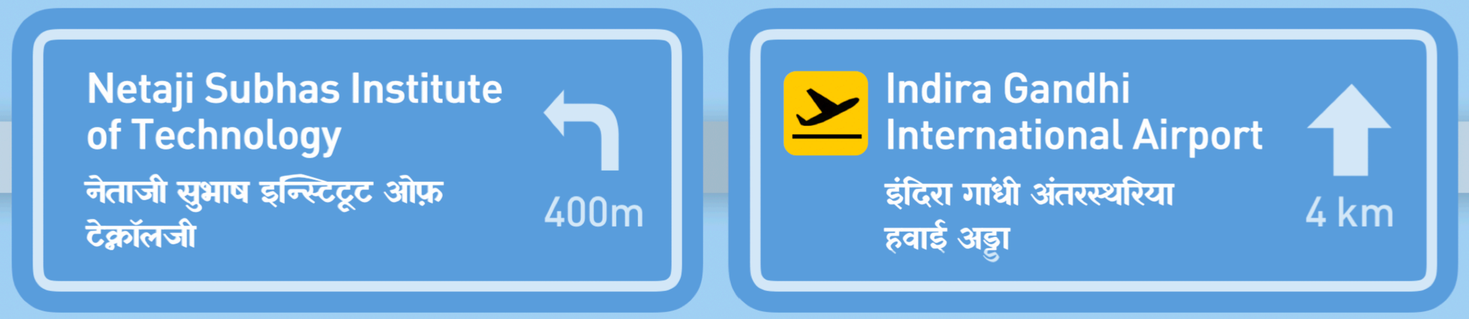
Glyphs

Errors

Swift Delhi Workshops — Zomato Delhi NCR

Introduction to User Interface Design — April 2018

What will I find, when I reach there?




802.11ac WLAN with MIMO
Avoid Jargon

Areas I can teach in:

Interface Design

Software and Hardware Prototyping

Qualitative Design Research

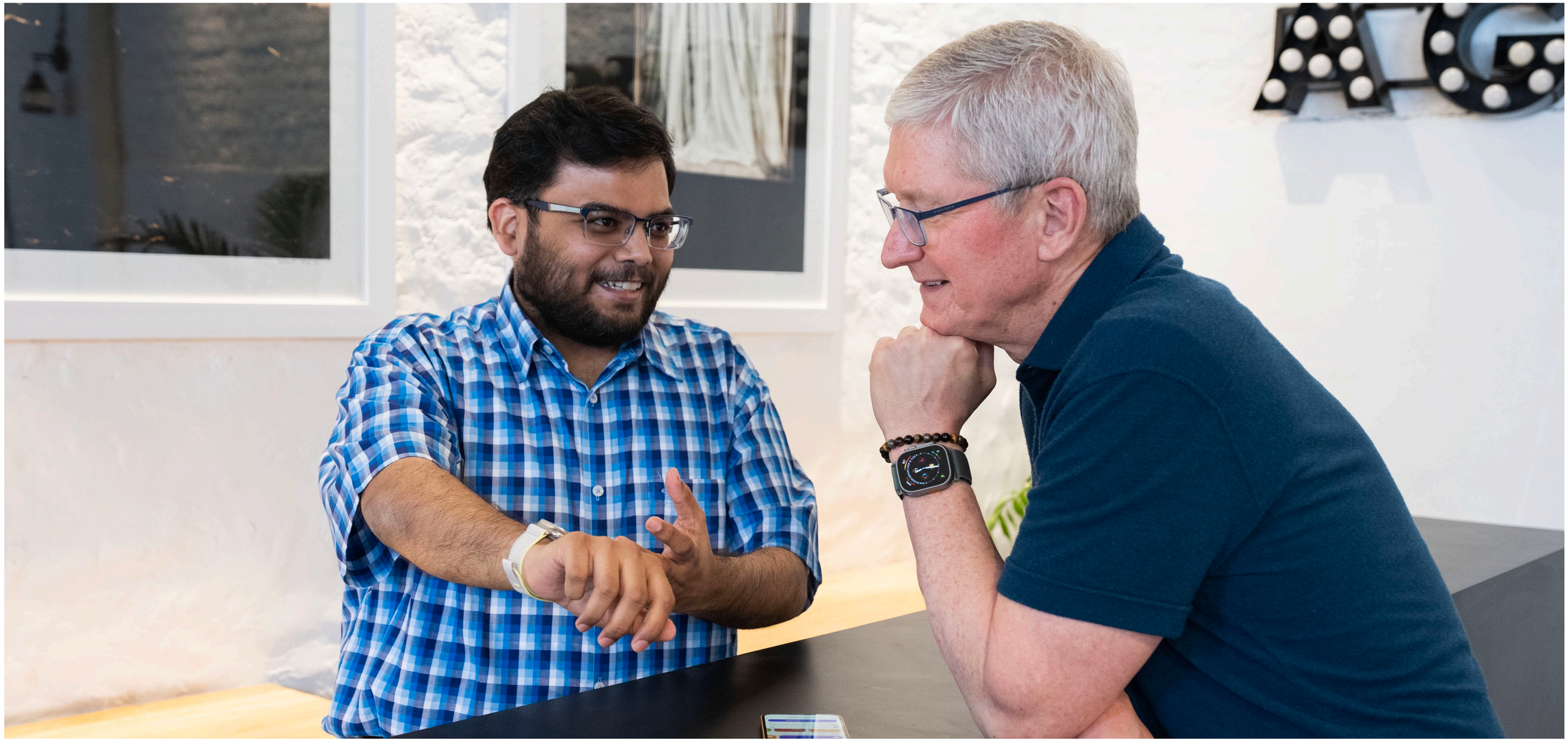
Designing emerging technologies

Design Frameworks

Education

University of California, Berkeley
Master of Design — 2023 - 2024

University of Delhi,
Netaji Subhas Institute of Technology
B.E. Manufacturing Processes and Automation Engineering — 2014 - 2018



This is me demoing my work to Tim Cook, CEO of Apple Inc.

Vidit Bhargava

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Blog: https://blog.viditb.com
LinkedIn: https://linkedin.com/in/viditbharg
Social Media: @viditb

Links

mvdit tech book eZine archive:
http://mvdittechbook.com

Action Centered Design Framework, ARCtic Conference 2025
https://www.youtube.com/watch?v=YC1z6adyKMQ

Introduction to UI Design, Swift Delhi, 2018
https://www.youtube.com/watch?v=L3397gcB8Iw