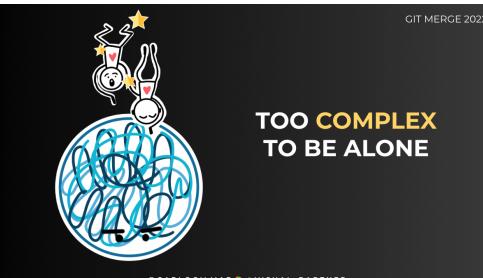


GIT MERGE 2022

EMPOWER YOUR INSTINCTIVE SKILLS

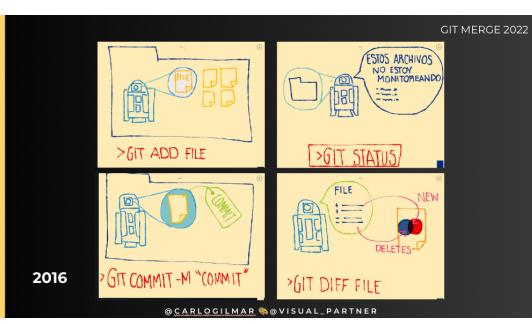
#	SLIDE	SCRIPT
1		<p>Hi everyone, today I have the big pleasure to share with all of you not just part of my story about how I learned git. I'll share why a tool like git transforms all my perspectives about software and why I consider git as a catalyst tool for any developer.</p>
2		<p>My name is Carlo Gilmar, I was born and raised in Mexico City, I studied Informatics Engineering, and also I studied sociology as well.</p> <p>I got my first job as a developer in a Mexican company named Making Devs.</p> <p>I had the big opportunity to be a part of the GitHub Campus Expert program.</p> <p>I'm the founder of Visual Partner-Ship, a creative studio to draw visual explanations about how technology works.</p> <p>Nowadays I'm part of the Americas team of Erlang Solutions working with technologies such as Erlang and Elixir.</p>

3		<p>As part of Visual Partner-Ship I created all the illustrations in these slides.</p> <p>So let's start from the beginning...</p>
4		<p>I remember when I was looking for my first opportunity in the tech industry, I didn't know which option to choose, I mean as a student you don't have too much context about how industry works, and for be honest this idea scared me, I just know that I wanted to look here and find my way.</p> <p>Fortunately I got my first opportunity as a software developer in a great place with a great team.</p>
5		<p>And you can't imagine how scared I was in the first week that I had to work on my first application and start to use many tools for the first time.</p> <p>This is a realistic representation of me trying to deal with all of these things.</p> <p>I remember it was an android application using groovy, a jvm language, my intuition makes me think that a good idea could be to make a copy and start to break it down.</p> <p>If something wrong happens I just need to erase the copy and make another one.</p>

6	 <p>GIT MERGE 2022 ©CARLOGILMAR ©VISUAL_PARTNER</p>	<p>One day my mentor decided to pair with me, we wrote some lines of code, and after that he realized we were working on one of my many copies.</p> <p>After explaining to him I made many copies because I was afraid of breaking the project, he decided to show me something that would transform my idea about how software works: git.</p>
7	 <p>GIT MERGE 2022 ©CARLOGILMAR ©VISUAL_PARTNER</p>	<p>Software is really complex. Dave Thomas and Andy Hunt in the pragmatic programmer talk about this as the term "software entropy" to explain how software tends to increase its complexity in many ways.</p>
8	 <p>GIT MERGE 2022 ©CARLOGILMAR ©VISUAL_PARTNER</p>	<p>And of course this should be intimidating for any person for the first time.</p> <p>This image represents me in many moments of my life learning new things.</p> <p>After explaining my feelings to my mentor, he mentioned me why use git matters, not just to keep the version control on the project, he showed me how using the commands and understanding some concepts behind git, you could be able to experiment with your code, he show me how to discard changes on a project and go back to the latest working version.</p> <p>So that means for me that you can be able to experiment with code, you can create your safe place to prevent serious mistakes,</p>

		<p>you can build this safe space to experiment.</p>
9		<p>For me git was my kind introduction to software development, and I fell in love because I git give me the opportunity to start to understand all of this complexity, give the enough reasons to asks question, git was like my learning compass to ask me often where I was.</p> <p>Git converts into one of my main tools to build this safe place to learn and experiment without fear, to build not just confidence, to build my autonomy as developer.</p>
10		<p>Git was the tool that made me feel I was able to understand something because I just needed to look at the commit history and use a git show or a git blame to start to scratch what was happening in a piece of code. These first steps give me a way to start to work on a team.</p>
11		<p>Answer where you are and recognize which things you have to ask, where learning that I achieve using git.</p> <p>And after that I was convinced to invest more time learning git.</p>

12	 <p>LEARNING GIT IS COMPLEX</p> <p>GIT MERGE 2022 @CARLOGILMAR @VISUAL_PARTNER</p>	<p>But nobody told me how complex it's to learn git as well.</p>
13	 <p>LEARNING GIT IS REALLY COMPLEX</p> <p>GIT MERGE 2022 @CARLOGILMAR @VISUAL_PARTNER</p>	<p>For me this was more complicated because as a Mexican it's not common to speak english.</p> <p>We don't have enough content in Spanish, and the content in English is complex in many ways even more if you don't have any previous experience.</p> <p>So this was the second time that I felt paralyzed learning a tool.</p> <p>I learned how learning technology could be a big challenge and made you feel disorientated.</p> <p>Git definitely wasn't the compass that I expected.</p>
14	 <p>"Every maker starts their journey with a basic set of good-quality tools"</p> <p>DAVE THOMAS & ANDREW HUNT THE PRAGMATIC PROGRAMMER</p> <p>GIT MERGE 2022 @CARLOGILMAR @VISUAL_PARTNER</p>	<p>One thing that I understood early in my career was to invest time in your tools. }</p> <p>As the pragmatic programmer says "Every maker starts their journey with a basic set of good quality tools".</p>

15		<p>I spend a lot of time and effort trying to understand how git works.</p>
16		<p>One day, after creating many repos to practice my git knowledge, I decided to draw how git worked for my mind.</p> <p>I didn't know what I was discovering when I combined technology and drawings, because I was validating my knowledge, but at the same time I was building my understanding about how a tool works.</p> <p>This allowed me to have clarity and order, but also taught me how to build my own learning narratives.</p>
17		<p>I needed to create my own resources to teach me these complex things.</p> <p>Build your narratives about how technology works for you.</p> <p>That's what I learned trying to understand git.</p>

18



GIT MERGE 2022

USE GIT TO TRACK YOUR LEARNING PROCESS

@CARLOGILMAR @VISUAL_PARTNER

Git taught me how to be careful with my own learning process.

Let me explain this point.

19

GIT MERGE 2022

LEARNING A NEW TECHNOLOGY TRACKING MY UNDERSTANDING USING GIT COMMITS

```
* 096cd75 (origin/feature/5) 4 years, 1 month ago carlogilmar #4 Showing every beer at home
* e998d48 4 years, 1 month ago carlogilmar #4 Adding Mirage
* 34be286 4 years, 1 month ago carlogilmar #4 Add an adapter
* af131ed 4 years, 1 month ago carlogilmar #3 Adding beers in index route
* e59158e 4 years, 1 month ago carlogilmar #3 Adding beer model
* af131ed 4 years, 1 month ago carlogilmar #2 Adding styles
* d292f3c 4 years, 1 month ago carlogilmar #1 Adding routes
* b6ee97c 4 years, 1 month ago carlogilmar #1 Set init view using bootstrap
* 1d7024c 4 years, 1 month ago carlogilmar #1 Adding bootstrap 4
```

@CARLOGILMAR @VISUAL_PARTNER

One day I needed to learn my first JavaScript framework Ember JS. Of course, I was scared about the complexity of this framework.

After many hours trying to understand Ember, I discovered how easy it was to start tracking my understanding about how to build an applications using the commits.

I was really so careful trying to commit just the code that represents a concept of ember. And after seeing my repos log history I enjoyed seeing my building history there as a bullet list.

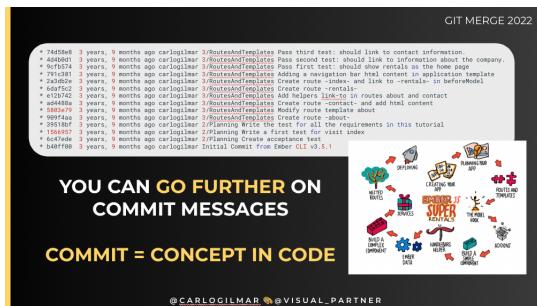
20



GIT MERGE 2022

Firstable I needed to have clarity in my mind, I needed to build my learning narratives about how a tool works.

21



So I started to explore this way, using the commits as a representation of a code concept.

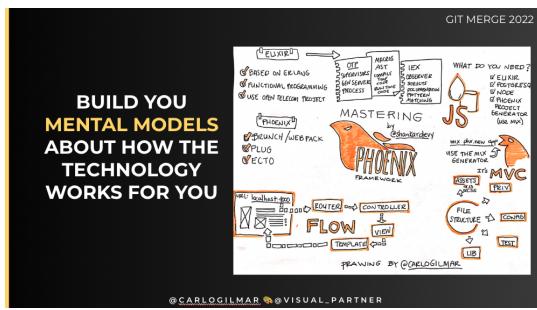
My main goal was tracking a learning story about to my own understanding

22



I found how valuable it's have this clarity, and how easy it's built on top of this. I created an ember training for my colleagues, I enumerated steps to follow, and I just made reference on the commits from a repository that they have as guidelines.

23



This is not about just committing lines of code.

It's about being conscious about your understanding about how technology works.

It's about being honest and sincere with yourself about what things you can understand and what things you can't.

Nowadays most of my illustrations of technology are coming from this principle: draw whatever you're understanding.

Being able to build this kind of mental models was thanks to git.

24



Joseph Campbell after studying many cultures, he discovered how many of them share a common myth, the story about how a normal human becomes a hero, and he modeled and structured this as a complete journey made by different stages, and he called this the hero's journey.

Due to software complexity, I learned how important it's build your confidence and autonomy as a developer. Learning how to use git will give you a way to build a safe network.

How important it's for me is to recognize how you're feeling facing technology, because I realized many of these stages are present when I have to deal with new technologies, and this allows me to know where I am.

EMPOWER YOUR COLLABORATION CULTURE

#	SLIDE	SCRIPT
25		<p>Git gave me a way to build my own hypothesis about how software is working for me, in my mind.</p> <p>But what really matters here is to force you to face your hypothesis with reality, force you to ask questions to your team, to show your understanding, your vision and confirm that you're right.</p>

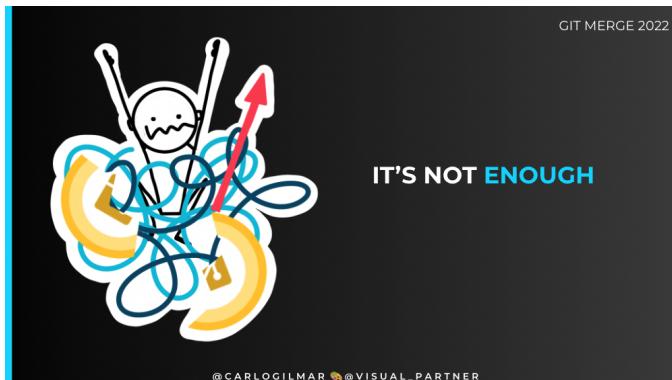
26



And this is so valuable because you can be convinced that investing time in git will give you better ways to understand what's happening inside a software project.

Building this instinctive confidence could be enough to face software complexity.

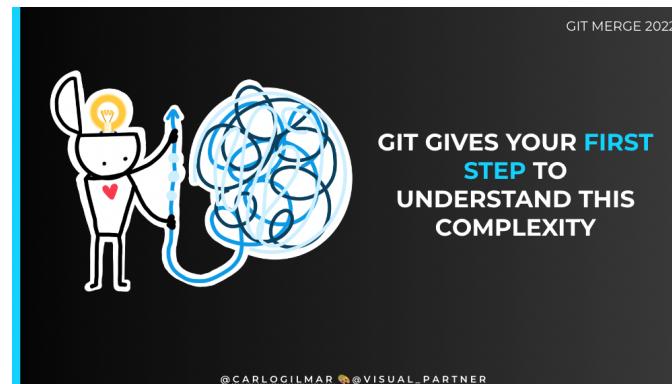
27



But it's not enough.

Because software complexity involves many other kinds of things: automation, testing, design patterns, CI, CD, security, business rules, and many more fields.

28



Yes, git isn't enough to be the only tool for any developer.

But here comes why git is really valuable, because git gives you the first step to understand software.

Git allows you to understand just a part, follow clues from your colleagues, this builds your autonomy.

29



Software it's built by people.

So git it's a kind of tool that makes you learn how to ask for help. But also allows you to share your narratives.

30



Years ago I was in a recruitment process where I needed to solve a code challenge.

I read the exercise, I broke it down in small steps, I drew a sketch and I solved it, and I would be able to write first my commit's descriptions before to code, and as my previous experience designing the ember workshop, I just code enough lines to cover the description.

I like to name this as Commit Driven Development because it's in the same way that Test Driven Development works.

This exercise makes me more conscious about my own coding process.

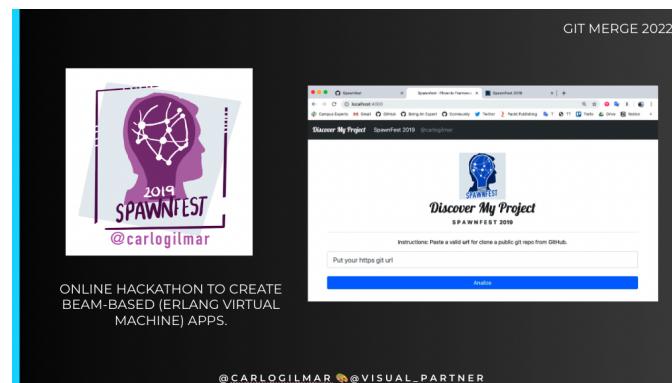
31



This converts into one of my favorite techniques to communicate my perspective, my ideas, my understanding.

Using git to tell how you're building software.

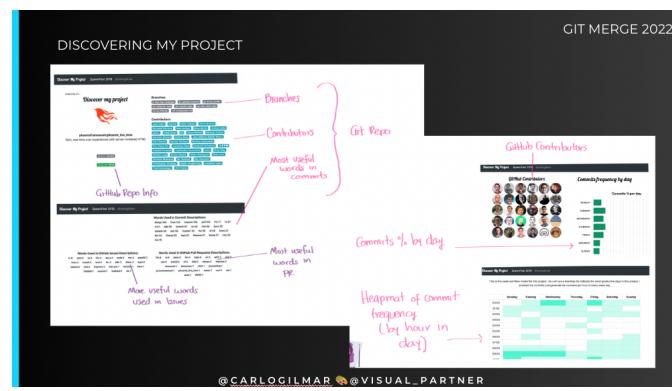
32



Some years ago I decided to participate in an online hackathon to create apps with elixir.

My idea was to create an application to analyze all the information available in a public repository.

33



I wanted to get all the information stored in a repository: branches, contributors, ,most common words used in the commits descriptions to try to discover hidden concepts there, also I had time to build a heap map to see the commit frequency by hour of the day, inspired by other open source projects.

34



And this project makes me think about how many things converge in version control through git.

Because this works as a common point for a group of people working for the same project.

How important it is to understand you're not alone, you can build your confidence, your safe place, and your autonomy but at the end of the day this is about your team as well.

Git showed me a way to become a better team player.

35



So after understanding this, of course I felt ready to face my next software project and face the complexity.

Git it's not the gold tool.

Git it's not going to give all the answers to your questions.

36

37



Git could give you a way to start.

When I joined my first elixir project outside Mexico I felt paralyzed.

But suddenly, my favorite tool, of course git, gave me a great idea:

what about reviewing the PR's merged, read the feature description and try to solve it by myself as an exercise, and just compare my code versus the code merged.

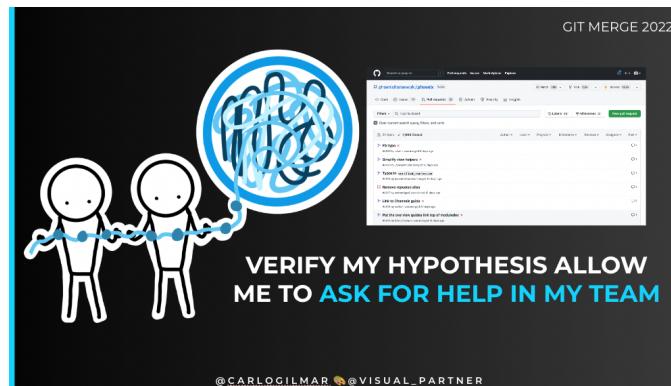
38



I was surprised about how many things you can discover with this exercise.

If you use git, you can start to see the commit history, create your hypothesis about how that piece of software was developed, and, in general terms, learn how your team is coding.

39



But after that, of course, git gave me a better perspective to ask better questions, because I just needed to use git blame to know who I need to ask for help.

40



Git showed me many other stages of being a developer.

Being autonomous and knowing how to ask for help were the values that I learned using git.

Build your autonomy, trust in your understanding, fail and fail again, realize you're part of a team.

Recognizing all of these moments allows me to create this model to help me to understand in which part I am when I'm learning something new.

GIT AS CATALYST

#	SLIDE	SCRIPT
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41



Git it's a tool that could improve your individual skills and your collaboration culture as well.

That's why I consider git as a catalyst that improves learning processes.

And maybe this could be just part of my own experience using git. But I'm really happy to share with all of you the next part.

42



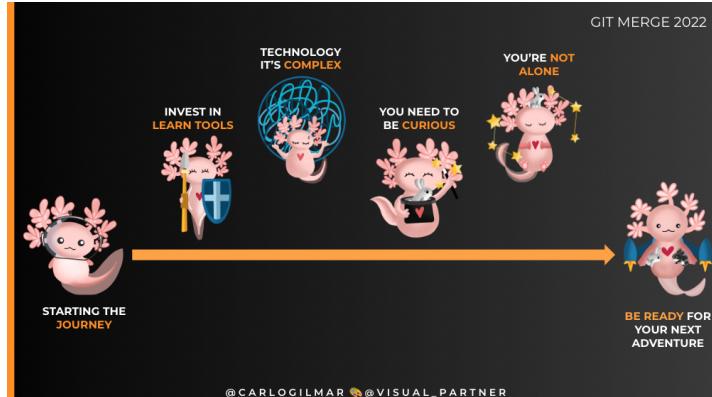
I was invited in February of this year to be a part of an educational program organized by Microsoft and the Mexican government.

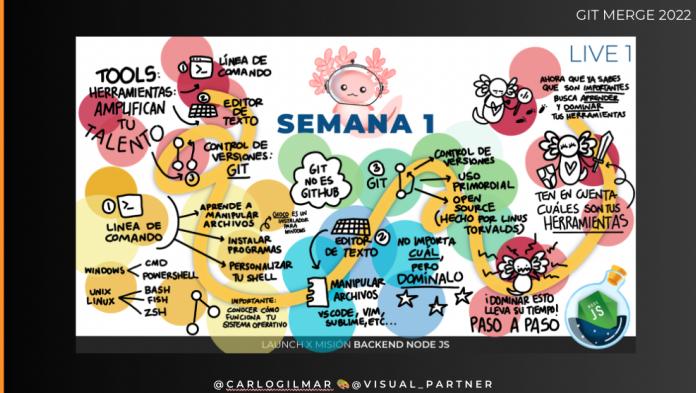
The challenge was to be a part of a full stack bootcamp about three months for graduate students from any professional career.

They invited me to design and teach just the part related to backend that involves creating a six-week training to learn Node Js.

I'm not a big fan of full stack bootcamps, but I consider this my opportunity to bring all my ideas about software and teach it to many people.

I drew this ajolote named Woopa as the main icon for all my resources.

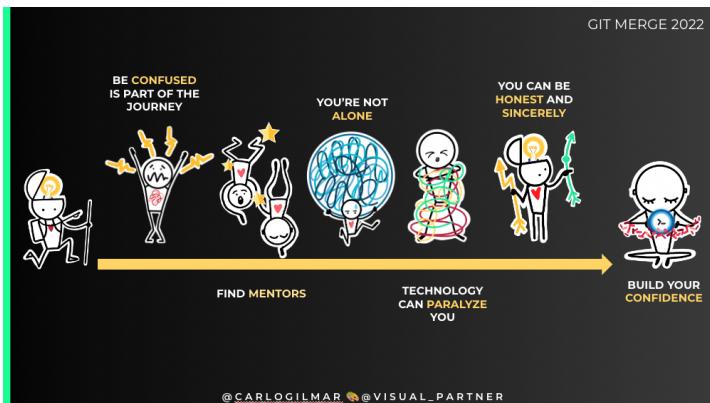
		<p>And guess what?</p>
43		<p>Of course I summarized all the stages that I mentioned before related to empowering your skills and collaboration culture to build my own training.</p> <p>And of course using git as one of the most important tools.</p>
44		<p>I had more than one thousand Mexican students looking to be a professional developer.</p> <p>They created their own blogs using Git, GitHub and GitHub Pages. Until now we created more than eight hundred static blogs built with git, gohugo and github.</p> <p>We used github to share common repositories, my students must fork some repositories and open PR's. I created a repository to store the exercises, and they just needed to fork it. Well, this project has more than eight hundred forks. I created small projects to encourage my students to make open source contributions. I have a repository with more than seven hundred of PR's to review.</p> <p>But also every live session when we were coding the exercises I used git to show all the things that you can</p>

		<p>do using git: track your learning projects, commits for test driven development, read a commit history, blame a file, download open source repositories...</p>
45		<p>This bootcamp represents my opportunity to share all my experiences using git.</p> <p>I knew my effort was worth it when one of my students sent me some messages to share with me how excited he was because he discovered a bug in an open source library to use Trello and he was able to fix it using git.</p> <p>A young student from Morelia with this mentorship was able to explore a software project and find a bug. You can't imagine how excited I was when he told me that he had discovered his passion in this world.</p>

CALL TO ACTION

#	SLIDE	SCRIPT
46		<p>From my perspective, today we have many tools, and there are many people innovating new ones.</p> <p>But I think we have the big opportunity to take advantage of the usage of all these tools.</p> <p>Why git it's so important for me? For all of this.</p>

47



Git showed me how important it's to be honest and sincere with yourself when you're learning a new technology, because all of these stages are continuously present.

Build your emotional safety.

48



If you want to improve your skills as developer:

Invest time in learning git.

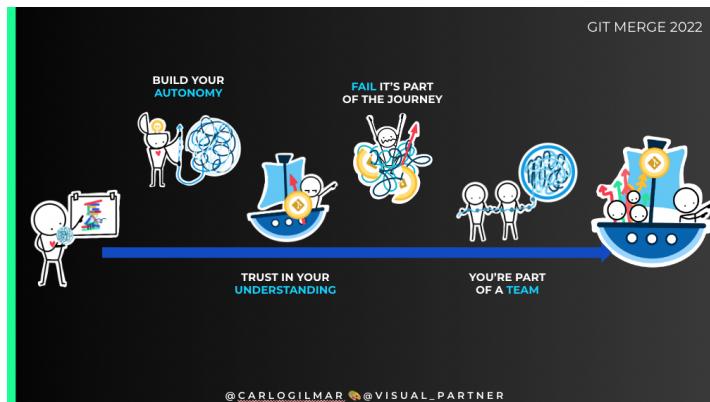
Use git as a learning diary for you.

Try to read your commit history and discover what it's saying to you.

Write first your commit descriptions, and then write the code.

Build your narratives through version control.

49



Understanding you as part of the whole could be a hard process. Git showed me this.

50



If you want to empower your collaboration culture:

- Think about what your version control is saying to you, and be careful on what you want to say to your team through your version control
- You can include rebuilding features done as part of your onboarding.
- Invest time to improve your commit messages, leave enough clues to understand what it's happening.
- Use git commits to build trainings for your team

CIERRE

#	SLIDE	SCRIPT
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51



Just to finalize this presentation, I'd like to answer this question: why am I considered important to talk about this?

Because all of this presentation was about what I could learn from git from my perspective.

52

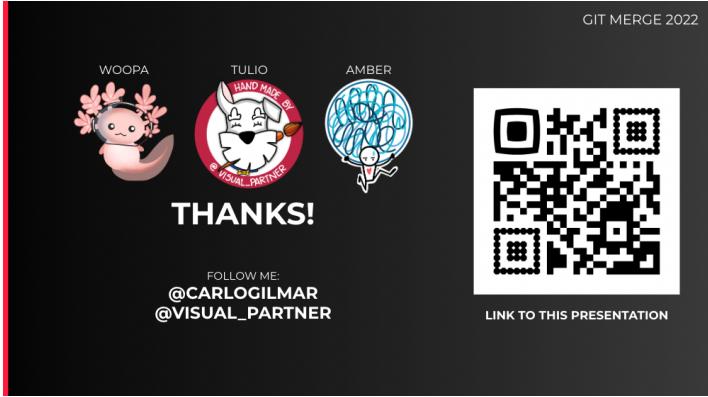


Of course because I'm mexican.

Because we face different challenges when we start our careers, we just need different ways to start to learn new tools, starting with the language gap that is the english.

Not just as mexican, I could say as latin, we are facing our working culture, that's why git was so cathartic to me: understand fail is part of the process, that I don't need to know everything, being a part of a team, that makes me to build my safety place in technology.

Learning git, teaching git, writing about git, sharing git, allows me to improve my career. Allow me to find the passion for software development, allow me to break my culture to

		<p>build a new one based on all of these values. How important it is today to talk about our values as persons who are using technology.</p> <p>How important it is to make this journey visible.</p>
53		<p>Thanks everyone. You can find me on my social media accounts as @carlogilmar or visual_underscode_partner</p> <p>If you like the slides, you can scan this qiuar code.</p>