Replit CEO Builds an App with 100% AI in 20 Min: Future of Coding?

all right uh I feel very lucky to be talking to amjad CEO of repet product I use all the time a lot I know a lot of people on the startup ideas podcast use repet and I asked him to come and just help us us hundreds of thousands of people that are going to listen to this build their ideas with repet and he said yes well thank you for having me I mean it's uh this is this is really uh my people you know people who are building and love using ret uh you know I'm excited to be [Music] here um so first of all before we you know get into a live cooking session why should people use repet to build their you know to to take their ideas and and make them reality yeah so uh you know the the reason I'm I'm building this company is because I've been an entrepreneur uh you know ever since I can remember like I started bu I built my first business when I was like uh and I remember how difficult it was to do everything from setting up a database to uh collaborating on code to like bringing in packages to maintaining everything to pushing to production or finding a way to get it out to the world and and that that sort of put me on a path that spent you know over a decade now kind of trying to make this process easier and so the fun fundamental philosophy behind that is that well there's people with so many amazing ideas in the world there's people with a lot of talents but how difficult coding is is kind of putting up this wall in front of a lot of creative people that could be bringing new products into into the world that you know could enrich the internet and our environment and uh and just I think that the more people making things I think I think just the the world is better and also there's like a social angle where you know the internet for the first time uh is is this magical place where you only don't need a lot of money to be able to create something and then you can really change your circumstances fundamentally so that's that's why I'm passionate about it yeah I also think uh the beauty is you know you don't need to be in Silicon Valley I know you're in Silicon Valley but you don't need to be in Silicon Valley to go and create something that millions of people use you can be anywhere um and use a tool like repet to go and and and build yeah yeah and and so what we what we do is uh you know try to keep that sort of term simple not use a lot of buzzwords but um you go into repet the first thing saying that like the core product is there's an editor in in in your browser so you don't have to download some kind of IDE or editor any or any of that we have a collection of hundreds of templates so whatever program language or framework you like we probably support that if we don't support it you you can also figure out how to make it work with repet we make those tools and tutorials available um and then you start a project uh and uh you start writing code or you generate code using our AI or you generate code using an external uh AI uh people like using Claud these days and by you know pacing it or putting it somehow into repet pushing it into repet um and you hit run rep will actually detect the packages that it needs to install will install them for you so you don't need to mess up with mess with a shell or do do all that stuff uh if you want to use Version Control it's also just point and click you don't have to go into the shell and and do that and when you're ready to uh to kind of deploy your

project it's one click as well and and also if you want a database if you want a uh object storage if you want any sort of really cloud services that otherwise you would need to go figure out AWS or some other service for it those are also like a couple of clicks and uh and so so now you have an idea you come uplet you generate the code or write the code uh you bring in the dependencies and the databases and infrastructure and one click done and you have your your website up now on top of all of that uh we know that coding is still intimidating for a lot of people so we created um in beta we have this product called agent that does all of that for you so you don't even have to click and so you just put your idea there I will emphasize that it is in Early Access so it is still quite buggy we're fixing it really fast and but we've seen people with from all walks of life you know uh real estate agents from from Ohio uh you have uh you know uh uh yoga coaches uh therapists uh really I've never seen anything like that I've been working on repet for for many years and all these people are able to build uh right now because uh you can just interact with the environment using using natural language and um and and and that's the goal and repc kind of is buil built on open source standards so we use git we don't lock you in you want to download your code and go that's fine you can use external editors some people use vs code and cursor with the repet as well I know you cover that on your show um you can deploy elsewhere and so really the ethos of Open Source and and open standard and I can't think of a better person to teach us the ins and outs of of repit than you um um would you be open to kind of sharing your screen and just you know demoing how you think about it and maybe giving people uh some tips and trips tips and tricks along the way absolutely let's do it I love it shh don't tell anyone but I've got plus startup ideas that could make you millions and I'm giving them away for free these aren't just random guesses they're validated Concepts from entrepreneurs whove built hundred million plus businesses I've compile them into one simple database compiled from hundreds of conversations I've had on my podcast but the main thing is most of these ideas don't need a single investor some cost nothing to start I'm pretty much handing you a cheat sheet the idea bank is your startup short short cut just click below to get access your next cash flowing business is waiting for you and while you're pulling it up I think repet is one of those tools and I don't say this lightly to everyone listening this is like a tool of a a generation so many of us have ideas but they we know we struggle with putting it out there and repet especially where repits going with agents uh makes it so much easier all right this this looks I see your screen now all right awesome all right so let's um uh let's improvise something do you have an idea to give me so so that it doesn't look like I prepared something um do I have an idea to give you like something is it is it crazy to do something with location yeah we can do location so um a a let's say like maybe a map of some of the scenic drives in in the Bay Area that that sounds that sounds perfect that sounds hard so let's see uh and do you mind just zooming in a little bit as well yeah so this is relet's homepage so we're going to use the agent at least as the access point so we'll we'll go into the coding as well but repet agent is like great at setting up the project so we're going to use it to kind of set up the project get the initial get the initial prototype going um and you could of course create the project manually and we'll cover that in a bit but let's go through the agent now so I just type like just in a sentence like a map of scenic drives in the Bay Area I have no idea where it's going to pull the data from I have no idea what libraries it's going to use and again just a simple idea and we can hit start building now so this tells me it's still in Early Access um now uh any minute now we should go into a chat interface um and the agent should start working on proposing uh a plan for me and while while that's loading you

know how indepth of a prompt should it be you know how short how in depth you know what what do you see as as best practice you know I I I like short prompts because um I like short prompts because the way I program is I have like an inlink of an idea and I like to do it in iterative fashion and so it also depends how how you think I think it's easy to over complicate things at the at the top and so I like to see something on the screen before getting in and like uh you know adding more complexity so you know here it's kind of pick the stock it's going to use streamlet that's that's fine by me it's going to build an initial prototype and uh you know it proposes all sorts of interesting features that we can add but I'm just going to go with the Prototype here so and then we can add some more features as we go um and so the first thing you'll notice is it'll just start cranking out code and it's really fun to watch it crank out code and you can even St of start reading and learning maybe what it's uh what it's doing here it's like creating creating the data with the with the with the drives I think it's just making it up for now we can ask it to pull it from somewhere and bit um it's now installing the packages uh so this is you know all the python environment packages you would need to to be able to make this application realize it needs to install a little bit more packages here and now it's going to configure the app to to run um and this is again doing kind of standard Linux uh configuration and then any moment we should be able to see something on the screen I also you know for for the beginner uh developers who are listening to this and even intermediate if you don't know what a package is or something like that this is a great time to just start googling and and and learning as you're as you're building I think that's uh a fun way to to learn how to code that's exactly right so here it um uh this is actually kind of my favorite drive across the Pacific Highway Coast so it kind of created a prototype it has some Skyland Boulevard is where uh you're not in the Bay Area are you I lived in the Bay Area for eight nine years so I know it well have have you been to Skyline I actually haven't I guess I don't know what that will so this is the car scene in SF so this is where all the Lamborghinis and uh really fast cars and motorcycles go because it's like this big uh Scenic stretch Road and there's like like a burger and bar and and gas station in the Middle where everyone everyone's there kind of showing off their cars so it got the right things there um and it has some some information here but also has some bugs like there's like an image here that that is not rendering we can select a a drive and it can show us the drive here um you can see on the right I'm already testing the uh the app on the right here is asking us is the scenic drives in the Bay Area App working can you see the interactive map and list of scenic drives so um so one of the cool things about how we built the agent is that it it is kind of like a coworker you can imagine it's like a junior software developer um and so it's kind of constantly ask you for feedback and so here yes it's uh working but I can see that there are images that are not rendering on the screen also the um the drive description on the map is hard to read maybe add a back a solid background so this is based on a you know bit of uh using the app you can sort of give it feedback it'll now try to debug and figure out what went wrong uh in in that bug whatever it is and then try to fix what I asked it to fix in the meantime let me show just the IDE features so as as it's coding I can just navigate here on uh to the code so here you have a full uh full featured code editor uh I can go in here and and code directly or use the built-in AI to do you know uh changes um uh that are more local because the agent generally does you know bigger changes in in the app uh I can invite someone to code together and this is if you've used um Google Docs is a really great experience to kind of code code with other people um so here it uh it updated the uh the app and it's asking me for more feedback uh you can also see here that it made a checkpoint

so if we don't like what it did I can kind of roll back to an earlier checkpoint so it gives you control over what's what's sort of uh missing so what I think is happening is that it's unable to render this car icon um and so you know as you're trying to navigate the bugs with it it's it's sort of you can learn what's going on and sometimes you can sort of give it um give it sort of hints uh about what's going and what's going on here so maybe I'm gonna open the dev tools see what's going on well I can just sell it no uh no neither of those things happened so it of again it's a junior developer it often makes mistakes and and we can sort of iterate back and forth with it I just have a a a product question I have to ask you while while this is happening why did you decide to call it you know replit agent versus giving it a name like the Greg the Greg agent or yeah you know Greg Greg engineer Greg would have been a wonderful name uh but the uh you know our our sort of philosophy at at repet with with naming is we we we don't want to um we don't want to set the expectations too high so if we made it as if it's like an actual person then people will have a much higher expectations of the of the product and I think you know naming uh really really matters uh you know Tesla for example is now rolling out ass they're actually self-driving uh sorry uh actually smart summon product so the initial product is SM sum was smart summon now it's called dumb summon and ass is the actually smart summon and so you get into this sort of um uh you know uh treadmill and naming when you set the when you set the the bar too high agent is kind of generic right it is an agent it doesn't it's we didn't name it autopilot or or automatic coder or or what have you or a person's name because we we just want to set the expectation that this is um this is something that is uh going to be trying its best to do what you ask it for uh but not necessarily always succeeding yeah and I think that's a good lesson in all products yeah exactly so um so so here we're kind of uh hitting a problem with the images I'm just going to tell it just just remove the image just remove the car image please it's not working and I guess uh the lesson there is you know maybe talk a little bit about how to think about debugging and you know reducing your variables and stuff like that yeah so um in this case like it's adding a feature that I didn't ask for in the first place it wanted to render sort of a car image in the in the map and it's showing up as a broken image and I was like really don't need that feature and it's trying really hard to to to render that car image and I'm like okay just remove that and so it added it added these um markers which I think are a lot better and now we have these uh uh these popups that tell me information about the rid which is way way better so this is this is great um so got to tell it uh yes popups are visible and it's working correctly um so so you know often times uh changing uh the requirement slightly when the agent is is hitting a a problem might kind of net out a a better experience um and now let me show you how to deploy this app and then we'll make some more changes I'll show you some other features so deploying an app meaning you taken application that is in development right if you notice here it says rep Dev this is a development URL you should not share that with the world you you can but this is not ideal it is um uh it is not going to be the most optimized version of it and it'll also go down after a time but if you want to keep it up forever if you want we can just set up this deployment so here it tells us like you know what kind of machine configuration do you want it tells you how much it's going to cost you I'm going to select something really small because I don't think it's G to it's it's that expensive of uh or or that you know performance of an app so uh here the Run command is automatically configured by the agent I don't have to do anything else really I'm just going to hit deploy um and so now this is gonna uh build a package uh it's going to ship it over to Google Cloud we use Google Cloud for for backend deployments and well actually it's

a very secure deployment as well will create a project just for this just for this uh this deployment and that deployment will stay up you can like look at logs uh once we start getting users you can look at analytics here you can look at the browsers devices countries where people are coming from so it gives you the entire kind of feature set needed to manage a production deployment and I don't think people realize how amazing this is as you know I'm a bad engineer and the fact that you've abstracted all of this away and just basically you press a button and it's deployed securely like this is how big of a deal is this it's pretty big deal like uh like again when uh I mean if you if you want to try to like figure out you know for example like how to deploy to a how to deploy to AWS uh let's see here what Google tells us uh first of all you need to look for something is AWS amplify it gives you a choice code deploy or amplify okay what does that mean uh so you get started under deliver you choose deploy and continue name your app environment you select the app and the code of the console save deploy and so you you need to figure out how to use the AWS CLI you need to figure out how to uh put your application code in there so you need to use something called SCP andftp what what the hell is this like what is SCP and how do you use it so now you're down this thing called secure copy protocol and you need to be able to uh use it you know open a shell and and and type a command and know how to use it and you're already down a rabbit hole that you really don't want to be down and so for us here we're just really try to make it a couple clicks you get all the security and all the features you need out of really any kind of um the best uh cloud Cloud providers available and and uh I will say also our prices are very very affordable are in line with are very competitive in line with the really top top Cloud providers yeah I just know that like in the past when I've built stuff and deployed it it's like so scary so the fact that you know you just press a button and it's done just like it it makes me it makes me want to come back and build more stuff because I don't have that scary part of deploying so here here's the deployed app so Bay or scenic routes one aasad ret app so anyone can could go to that and be able to use it now it's still booting up here but it is a production app it is on the internet uh and and and you're done and now we can go back to the app and kind of do some more some more things um and and this and crucially we can go to the app and do more things and this will not break this will continue being up and that's the important things about deployment is that it is now separating your development environment from the deployment environment quick ad break let me tell you about a business I invested in it's called boring marketing.

com so a few years ago I met this group of people that were some of the best SEO experts in the world they were behind getting some of the biggest companies found on Google and the secret sauce is they've got a set of technology and AI that could help you outrank your competition so for my own businesses I wanted that I didn't want to have to rely on Mark Zuckerberg I didn't want to depend on ads to drive customers to my businesses I wanted to rank high in Google that's why I like SEO and that's why I use boring marketing. com and that's why I invested in it they're so confident in their approach that they offer a 30-day Sprint with % money back guarantee who does that nowadays so check it out highly recommend boring marketing.

com now uh I I want to just show a few things that that we also abstract our way that are very very nice so we have post grass uh databases so postr is kind of the state-of-the-art database you might have heard of superbay and other databases like that um and and we can oneclick uh integrate into the project or you can ask the agent to do that so I'm going to just

ask agent um I want to use uh postgress DB instead of the CSV and be able to add new drives so you know the agent although it complet and redeployed you can always ask it for for more things it will never kind of complain uh sometimes it's lazy but for the most part it will not complain it will try to do what you want so if uh if we don't had any ISS issues it should be able to create the database for us and set it up and I have a question you know if I'm unsure if I should use postgress for example could I use the agent and just say you know what are the pros and cons of using postgress yes uh you can use the agent you can use our AI feature which is like a lot cheaper um and uh and faster because it's just a conversational thing so if you go to a new tool type AI or here under the tools AI so distinct distinct from the agent just say uh tell me uh the pros of and cons of post cross and I recommend people use repid AI here as just as you know to slow down and use repid AI if you're trying to learn um right yeah exactly and it also has access to your code base and so here you know uh our agent created uh the post crust DB and wrote a little more code and so I can say like explain my code and it should do that step by step so it will it's going line by line so if you go to main.

py you can see that it is uh you know working on getting the database con ction everything and it's saying uh we're creating the data we're loading the data we're creating the map and and really step by step and so it can also describe exactly what the agent does and this is especially important when the agent hits sort of a dead end or a problem which happens it's still very very early technology uh you would want to use repet AI to do to do some of the debugging so here we see the database was created by the agent and um and the app is is working and now the app uh is should be using the the new database and so here we we have the scenic drives table and we have the data inside the table so it it migrated from the CSV it took it to the database it reran the project and the app is still working we have the scenic drives so it's asking us is it loading correctly so you know it did the migration is it loading yes it's loading correctly displaying so I I I can't emphasize how much um work that saved me you know typically I would have to go research different databases again I would have to go to AWS or something like that and figure out how to um how to configure a database and then connect it somehow here it did all of that for me uh and so I'll show you how it connected it you know it created these secrets these are my um database connection variables I didn't have to mess with any of that I didn't have to create tables it did that for me uh it wrote the SQL for me uh and now it's selling me hey we're ready to deploy again if you want to deploy a new version it's crazy man um let's see what else uh can I can I show you here we have um we have Integrations make it very easy to integrate with uh all sorts of AIS open AI anthropic Google Sheets you can also ask the agent to do that for you and I will ask you for the keys and we'll give you uh examples we also have code samples for all these uh Integrations we actually have also a built-in authentication so uh you can uh you know with one click of a button you can uh sort of make the app locked to uh to only use uh rapet authentication for you or for your team so if you have a team's account you can really um make it so that only people on your team can access your app this is very useful for internal tools and we see a lot of people using repet for internal tools um let's go to get I I mentioned get uh uh previously um so here every action that the uh agent did since the start since the initial commit minutes ago have been recorded here and so I can go and go into any of these commits and roll back I can push to GitHub if I want so here if I want to um create a repository on GitHub I need to repository's name scenic drives let's make it public and then I want to go back and push push branch and maybe explain to folks you know why why are you using

GitHub why are you pushing to GitHub for sure so uh GitHub is a um a version control system and a collaboration system so if you want to uh put something open source so that other people can contribute to it other people can use it and open issues uh for you um and you like here's what's missing here's what's working and what's not working uh you can you can use GitHub for that and so you can think about repet repet is the sort of real-time interface for creating applications you can use repet for deployment for editing even for collaboration but it's more real time you could think about GitHub as the more long-term sort of storage for your app so if you want to uh keep it version there they have a lot of really interesting tools to help you manage your application uh people can download your code and again there's this feature called Pro requests where people in open source or people on your team can send you can send you Pro request uh this is true of GitHub and other places like gitlab you can do all of that from repet so here we are I think in like you know uh you know 20 minutes we were able to build an application we deployed it we did the data migration we moved it to SQL we pushed it to GitHub and we're on our way like if this was a real project I've already made real progress uh towards my scenic drives startup which if you built that app by the way if you have the best scenic drives app I will be the first to buy it because I really like this stuff so what are the limitations of repet and repet agent you know like what what can I add to this app what can't I add to this app how how do I think about that yeah um so let's talk about limitations of repet agent I'm going to stop sharing for now and just uh talk about that so you know large language models uh are trained uh to complete sentences right that's the main way they're trained and so this idea of agent um is a very old idea of nii the idea is that instead of completing text or images you are creating actions the way agents are built today are kind of a hack like it is not really trained to be agentic and the way we're doing agents is mostly via something called reflection where the AI is thinking and you might have heard of open AI 01 is also doing sort of reflection and the other thing is Tool uh tool calling or function calling some some companies call it and this the idea where the AI returns a um Json that tells the developer to call a tool tool a tool such as create a database a tool such as edit code um and that allows us to build something magical like uh like repet agent but again because if it's sort of of a hack like these uh openi and anthropic and Google haven't really trained these systems to be action systems they tend to have low lower reliability what we do behind the scenes is do a lot of retries that's why a little slow uh it's a bit slow and expensive because we're trying to get their liability up um when you we're now two features in right like we built the initial prototype we moved to post grass let's call it like you know features in the system starts to struggle a little bit um and so you know we're working on ways to scale that and we're working on ways to start new sessions such that you're you don't have such a long history because the AI starts confusing itself with all its memories um but for now it kind of really starts to struggle and so you want to start moving to to our AI or some other AI to start helping you kind of copy pasting code very soon we have a new feature coming up that doesn't have this limitation of repet agent but it's still somewhat agentic so think about it as another tool I'm still not prepared to kind of give it a name yet or talk too much about it but it'll let you make large changes to your project without running into these skillability issues that we have with with the agents so I would say using the agent today get get your MVP get your prototype you can probably get it all the way until users are using it and then you're still going to at some point have to understand the code and have to figure out how to edit it if not understanding the code maybe you'd have to learn how to use you know more typical AIS to like repet AI or claw to to be able

to edit the code yeah I think this is this is a beautiful place to sort of end it I think that um prototyping is way better than a deck prototyping is way better than you know just a tweet right so use repet to prototype it get it out there get feedback um we've done it in just a short amount of time and then as repet continues to grow and sort of evolve as an ecosystem and and a software um you know your prototype can evolve with it um and yeah I I will say our systems are are very scalable so you can build entire startups on repet it's only the agent that is still still early and not super scalable so um we have uh uh startups that reached um tens of millions in AR uh running uh on repet using just ret database and ret autoscale deployments because we're building a lot of it on just existing scalable infrastructure in AR Google cloud and existing AIS um but it's it's the the agent is really new technology and it's not has not scaled well but you you said it you know you're absolutely right it's like a prototype is is you know they say a picture uh or an image is worth a thousand words a prototype is worth a billion words right we can you can have all sorts of ideas about what you're going to build the moment you get a prototype in someone's hands and you watch your user use it you're going to get so much input and so much feedback I want to leave people with a story uh a success story of someone who's used you know repet or repet agent um maybe in the last months built a startup had an idea put it out there um what comes to mind as you know one or two stories that you could that you could share so that people could listen to that get fired up uh and wanna and want to start uh their their Journey there's an entrepreneur his name is Adil KH he is a he was a school teacher and during the pandemic he was um he was kind of bored he didn't uh he didn't have a lot to do and so he learned a little bit of coding he went on repet he created this app called Magic School and magic school um lets teachers uh use generative AI uh in a safe and educational way like you can make uh new assignments you can correct assignments it really supercharges teachers makes them kind of superum in a way that's what the best thing about Ai and he quickly got traction he launched mid uh early this year he raised uh I think $20 million and the revenue ramp was something really really fantastic and I think they're raising uh they're probably going to raise another round soon because they're doing phenomenal um and so so this is an uh this is a a teacher learned a little bit of coding got their got their idea out there scaled it really quickly and was able to raise uh a ton of money and so this is really kind of what's possible but we also have a lot of Indy Indy hackers um uh one of my favorite Steve Steve Marco who builts uh builts data.

org he's originally a a photographer if I'm getting it right um uh we have folks that are uh that uh there's also um Petro skano who was uh who was a designer uh and built this company called ever art and he's now you know building really amazing AI things like uh Claude engineer and engineer and um and there's so so many St I can spend the next next hour talking about them but they all they all kind of follow the same trajectory uh someone who's not even an engineer had a had a spark of an idea but wasn't afraid to try and I think that's the crucial thing is that you should just try you should put some hard work into it and I'm I guarantee you you're going to surprise yourself about what you're going to be able to do that's that's a beautiful beautiful place to end and I think you're totally right I think uh these PE you know these are teachers who designers you name it who you know change their life um so it is beautiful uh how these Sparks of an idea once you put into code what what what could happen I'm J thank you so much for your time where could people you know get involved in repet and and and you know start start using it just go to rep.

com sign up sign up for an account we have the core core plan which gives you everything from database credits AI agents um it's it's really kind of the most affordable kind of Builder plan on on the internet in my uh in my experience and a lot of our Builders tell us that as well um and uh and on one Twitter aad um and uh I I love sharing what people are building with with repet and and i' I've been able to help a lot of people uh get get some initial distribution so if you build something tweet at me and I'll I'll share it with the world and maybe maybe folks comment what your what you're working on with repet and it would be really cool if one day we can do some sort of live event where we're all kind of building and and working together so um let's uh maybe we can bug I'm J about that in yeah yeah let's do it let's do it all right all right thanks my man I'll catch you later thanks Craig see you [Music]