



The image shows the Medium mobile application interface. At the top, there's a navigation bar with a "Sign up" button and a "Sign in" button. Below the navigation bar, the Medium logo is on the left, followed by a search icon and a "Search" input field. On the right side, there are "Write" and profile icons. The main content area features a large, dark purple diagonal-striped background with a central blue square icon containing a white geometric shape. The URL in the address bar is https://medium.com/@mike_tyson_cloud/we-tested-30-ai-tools-for-devops-discover-the-best-in-our-comprehensive-list-594564073569.

Best AI Tools for DevOps

AI DevOps Landscape 2024



Mike Tyson of the Cloud (MToC)

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5 min read · Nov 22, 2023

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Since the launch of AI in early 2023, the landscape of my workforce has undergone a profound transformation. As a leader, my focus has shifted

significantly. No longer am I entrenched in the details of writing Terraform code or immersing myself in the nitty-gritty of infrastructure tasks.

Instead, AI has empowered me to elevate my attention to strategic matters, steering my team with a broader vision and deeper insight. This technological shift has not only streamlined our operations but has also reshaped the way we approach our work, allowing us to be more innovative and forward-thinking.

TL;DR

- Evaluation Criteria
- Best AI Tools per category
- AI Vision 2024
- What's next? [Brainboard AI](#)

Evaluation criteria

To effectively assess the utility of these AI tools, it was essential for me to conduct a consistent and fair evaluation. This meant using the same prompts and meticulously comparing the outputs, whether they were code, diagrams, or other deliverables.

Prompts used

The prompts I selected for testing were as follows:

- 1. Basic AWS EC2 Instance:** “Create a Terraform configuration for a basic AWS EC2 instance in the US West (Oregon) region, with a t2.micro instance type.”
- 2. Azure Kubernetes Service (AKS) Cluster:** “Generate a Terraform plan for an Azure Kubernetes Service cluster with three nodes in the East US region, including network configuration.”
- 3. Google Cloud SQL Database:** “Set up a Terraform script for a Google Cloud SQL PostgreSQL database, with automatic backups and a high-availability configuration.”

The prompts are proved to test any AI's capabilities:

- 1. Multi-Region AWS S3 Buckets:** “Design a Terraform configuration for creating S3 buckets in multiple AWS regions with versioning and lifecycle policies.”
- 2. VPC Setup in AWS:** “Draft a Terraform configuration to create a Virtual Private Cloud (VPC) in AWS with two public and two private subnets.”
- 3. Scalable Web Application in Azure:** “Develop a Terraform script for a scalable web application in Azure, including App Service, SQL Database, and autoscaling settings.”
- 4. GCP Compute Instance with Firewall Rules:** “Create a Terraform configuration for a Google Compute Engine instance with specific firewall rules allowing HTTP and SSH traffic.”
- 5. AWS RDS MySQL Database with Multi-AZ Deployment:** “Construct a Terraform plan for an AWS RDS MySQL database instance with Multi-AZ deployment and a read replica.”

6. **Azure App Service with Custom Domain:** “Formulate a Terraform script to deploy an Azure App Service with a custom domain and TLS/SSL binding.”
7. **Cross-Account AWS IAM Roles:** “Build a Terraform configuration for creating cross-account IAM roles in AWS, including necessary policies for S3 access.”

Expected AI Output

1. **High-Level Designs:** My focus wasn't on the overall design quality — Midjourney excels in that regard far beyond other solutions. Instead, I concentrated on evaluating the practical aspects of the design — what could realistically be achieved with it.
2. **Terraform Code:** The key here was not just whether the code generated was valid, but how well it aligned with the prompt's specifications.
3. **Assisted Work:** This includes any step-by-step guides or documentation provided by the AI to facilitate the implementation of the Terraform configuration.

Best AI Tools



Best AI Tools for DevOps

Reply to this article with new AI tools. I will review them and class them.

Navigator



AI Buddy



VScode extension



High level Designs



Create and edit



Deployment cycle



Monitoring



Security

Navigator

In the world of chatbot-like and search engine technologies, numerous competitors have developed their own unique offerings. However, when tested against our specific prompt, one option emerged as the clear leader.

1. Claude & Bing are competing for first place, having an almost valid terraform code output.
2. ChatGPT 4.0's terraform code is useless.
3. Perplexity
4. Bard
5. Adrenaline

AI buddy

To speak candidly, none of the options explored were thoroughly convincing or comprehensive in their approach.

1. GitHub Copilot is great just because it has exponentially enough data for an AI to understand code specifically.
2. Atlassian Intelligence
3. Kubiya
4. Structura.io

VScode extension

Although the market is flooded with a myriad of VSCode extensions, it becomes apparent that not all are adept at comprehending HashiCorp Configuration Language (HCL), with a few notable exceptions:

1. Cody AI can clearly compete with AskCodi, Codeium, Bito.ai or chatgpt-vscode.
2. ChatGPT – EasyCode can compete with CodeGPT by Tim Kmecl.
3. Terraform Writer is pretty good for a start but the terraform configuration is often wrong.
4. tfgpt can compete with dev-gpt

High level Designs

As of now, none of the tools I've evaluated have been sufficiently satisfying in terms of high-level design capabilities. This means that while their output might be intriguing for a blog article, it falls short for practical use in real-world infrastructure scenarios.

1. InfraSketcher
2. Lucid (ChatGPT plugin)
3. Miro

Create & edit generated diagram

Creating an infrastructure diagram from an AI prompt is one thing, but having the flexibility to modify it to suit your specific requirements is an entirely different challenge!

1. Eraser (ChatGPT plugin or Playground)
2. Pulumi AI

3. InfraCopilot

4. Cloud diagram gen by Hava (ChatGPT plugin)

5. AIaC by Firefly (I was not able to try it)

The Deployment Cycle

In terms of the deployment cycle, there hasn't been much innovation, apart from AI solutions that are tailored to specific branded products.

1. Harness AI

2. Amazon CodeGuru

3. GPTDeploy

Monitoring

This category stands out as the most advanced in terms of AI integration and development.

1. Datadog Bits can clearly compete with PagerDuty or Dynatrace.

2. Security Sysdig ravel with Snyk DeepCode.

3. Cast compete with K8sGPT

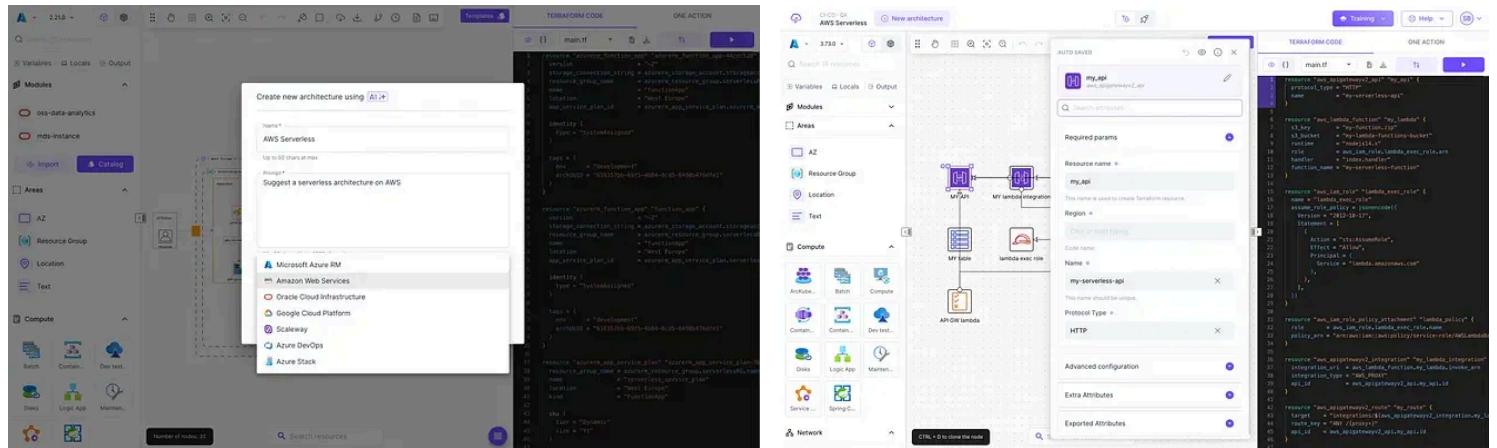
AI Vision 2024

Our vision with Brainboard AI is to facilitate the initial stages of your infrastructure projects, or to provide clarity in complex Terraform configurations. However, it's important to note that while our AI can assist in these areas, it isn't designed to autonomously generate valid Terraform code or produce perfectly detailed diagrams on its own.

We stand by the philosophy that having a starting point, even if it's not complete, is far more advantageous than having nothing at all.

What's next? Brainboard AI

We are excited to announce the launch of Brainboard AI's new feature, Bob, now available to our beta testers. Bob is designed to generate diagrams and Terraform code directly from your prompts. Please note that to generate valid Terraform code, your specific configurations are required.



Our team is committed to continuously improving and expanding this innovative tool. Interested in experiencing Bob's capabilities firsthand? Join our beta testing program [here](#).

If you think Brainboard is a match for your organization, [contact us](#).

Artificial Intelligence

AI

ChatGPT

DevOps



Written by Mike Tyson of the Cloud (MToC)

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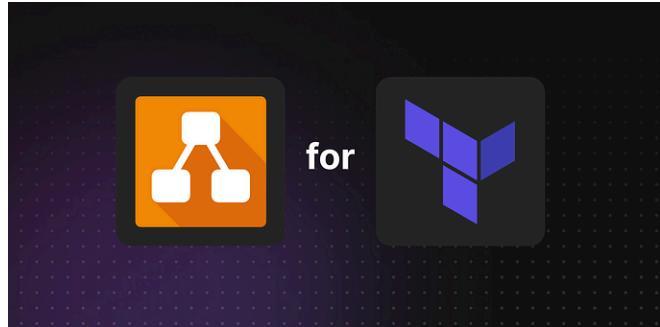
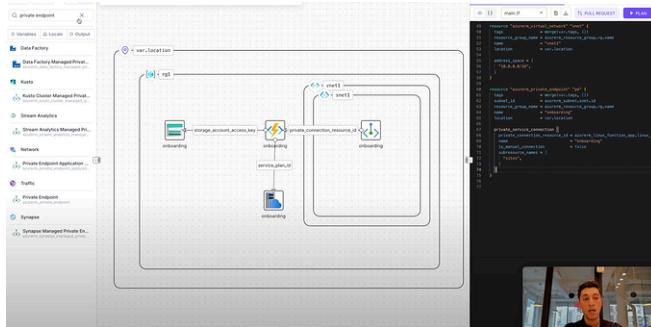
As a growth architect in the cloud (AKA Brainboard), I build scalable solutions to drive business growth and improve efficiency while learning to code.

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What are your thoughts?

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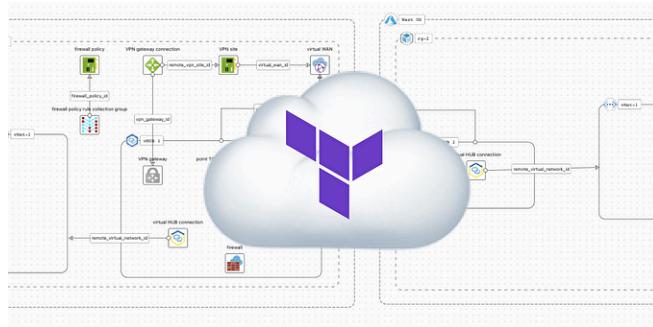
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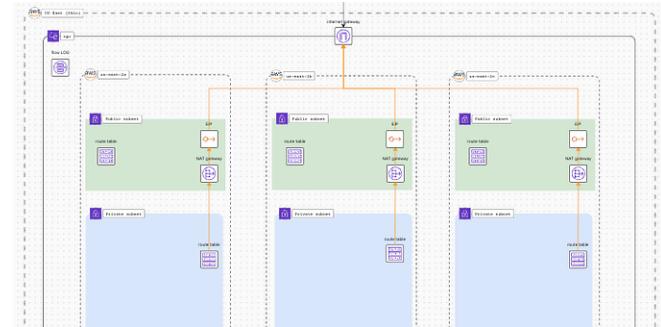
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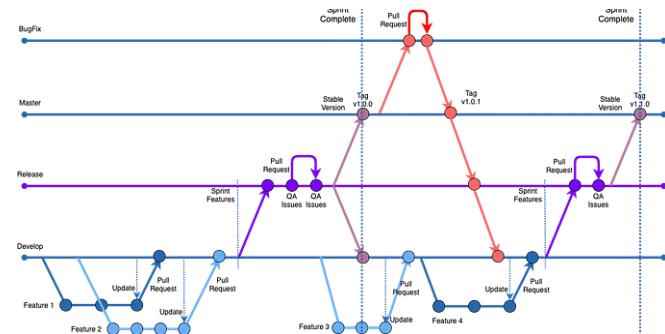


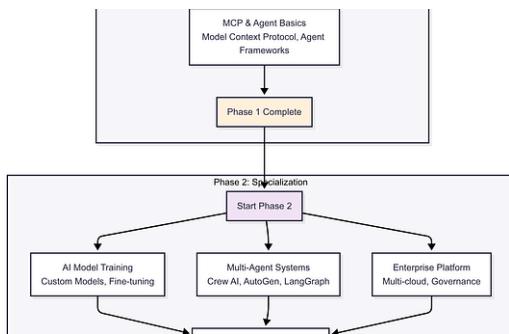
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