AppsTek CORP

IntelOps

Harnessing GenAI & Open Frameworks:

Transforming Engineering Teams into Strategic Innovators and Business Value Creators

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Agenda

- Education on GenAI
- GenAI for Modernization
- Use Cases
- Possibilities

Sharing today's experience – looking at it as an Eng.

Setting Context

Services – Application Development & Managed Services

AI Product - Defects & Anomaly detection for Business

Product & SaaP (Service as a Platform) - New model for Services + CodeGen & Platform Engineering product - - SaaS 2.0

GenAI is a Tech

- Foundational Models with complex architectures & algorigthms
- Compute Power
- Data

- GenAI tech depends on the type of Data representation & relationships
- GenAI is trained on large datasets as general-purpose model using Transformers Modeling for self-supervised capabilities
- GenAI needs to be treated as tech, not as a direct solution

Unlocking GenAI's Potential Responsibly

- Considerations

Image by Freepik

- Prioritizing Business Requirements
- Skill debt
- GenAI System Development Life Cycle (SDLC)
- GRC (Governance, Risk & Compliance), Transparency, Trust, Software Supply Chain Security
- Data Protection & Responsible AI Strategies
- Safe & Secure In-House AI Platforms
- Evolving from AI Users to AI Value Creators

GenAI Usage –
Business perspective

Image by Freepik

- **Solve Real Business Problems like App Modernization, Enhancing Customer Services or new Offerings**
- **Create new vital Solutions to improve business value**
- **Encourage Innovation by leveraging AI**
- **Create new line of business for new revenue generation**
- **Streamlining Operations & Processes**

GenAI Usage -
Eng. Perspective

Image by Freepik

- App & Infra Modernization
- New Tech. adoption
- Rebuilding existing applications with modern secure languages like Go & Rust
- Spending more time on understanding and adding value to the business
- Being Agnostic & Future Ready

Navigating Complexities - GenAI Adoption Challenges

Code Ownership

Speed of adoption vs Treating AI as journey for Long-Term Benefits

GenAI Quality Engineering

External data Risks

FinOps

Standards: Software Supply Chain Security, DevSecOps, etc.

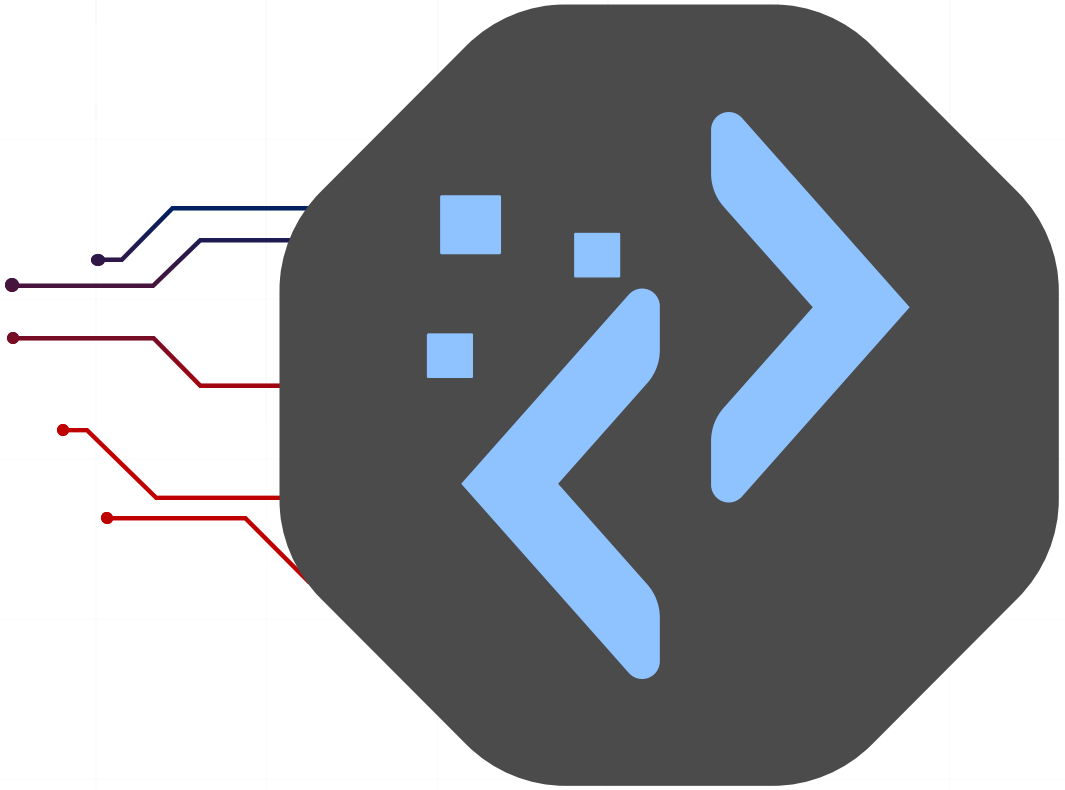
AI "Hallucination"

Lack of Global Industry Standards: Trust, Transparency, and Bias Reduction

Introducing Agnostic Open Framework "Compage" -

Enabling Engineering

- Own Your Code with Compage License (Privatization of Code, Copyright)
- Standardize & Automate Code Generation
- Reduce Development Time by 50%
- Generate Code in Multiple Programming Languages – Golang, C#, Java, Rust, Python, etc.
- Pair it With GenAI for Business Use Cases

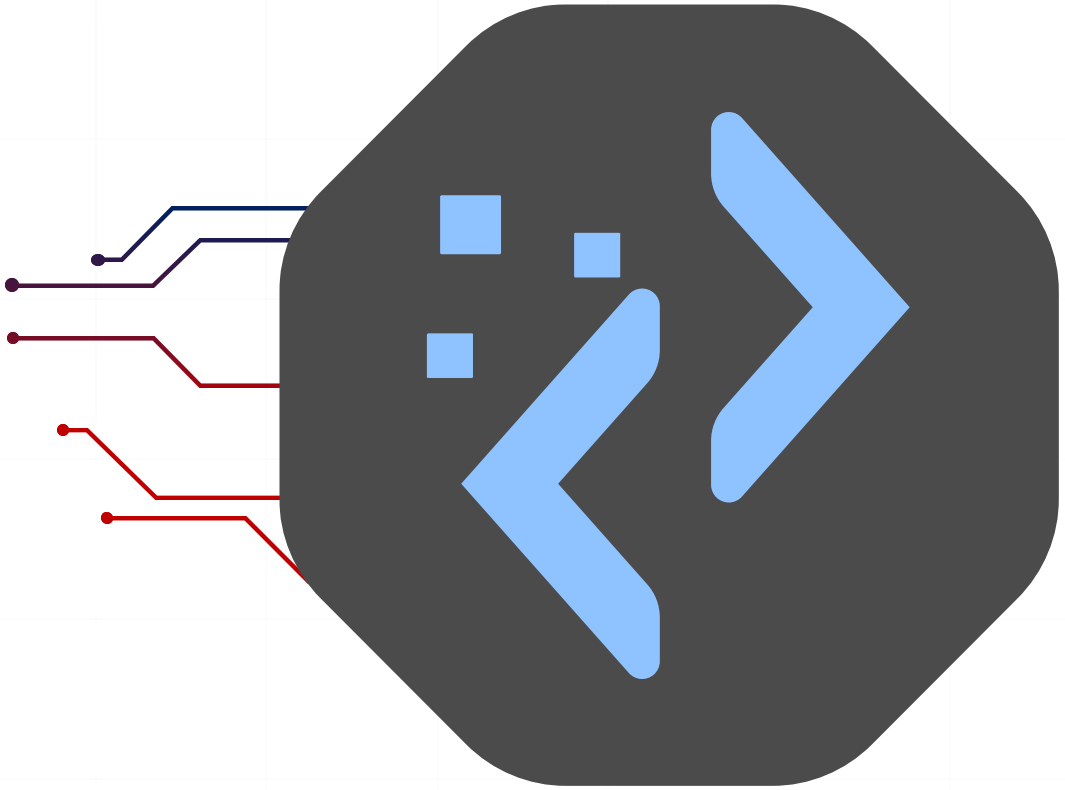


Introducing Agnostic Open Framework "Compage" -

Enabling Engineering

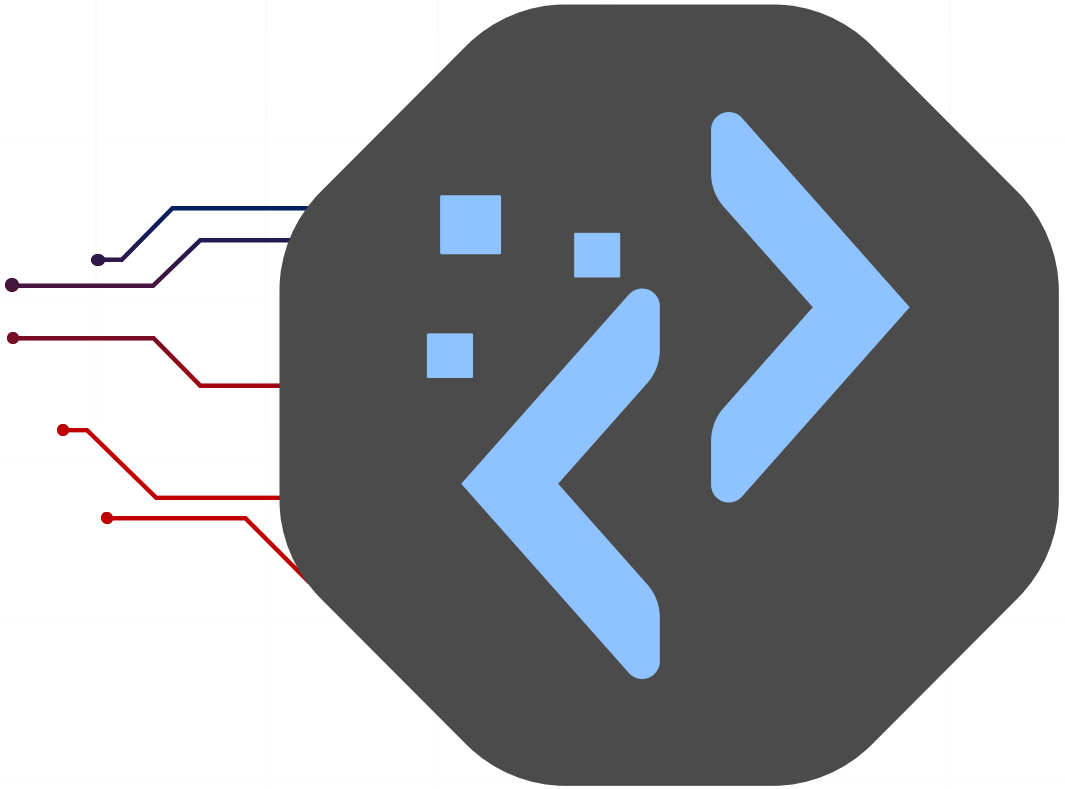
More Benefits:

- Auto Self-Healing, Updating & Self-Maintenance
- Auto Enhancements of Security Threats & Proactive Preparation of Evolving Future Threats
- Focus on Reducing Skill Gaps
- Drive Business Innovation and Iteration
- Training Engineers as Business Innovators

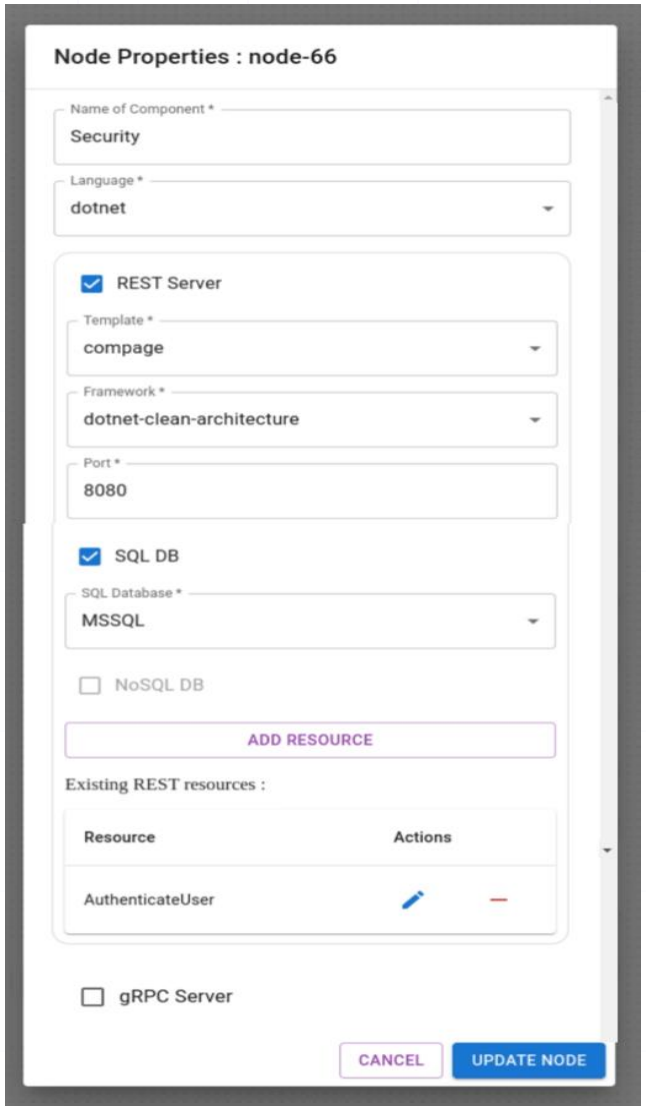


Here’s a quick demo of how Compage saves development time while following standards

Quick flow of it



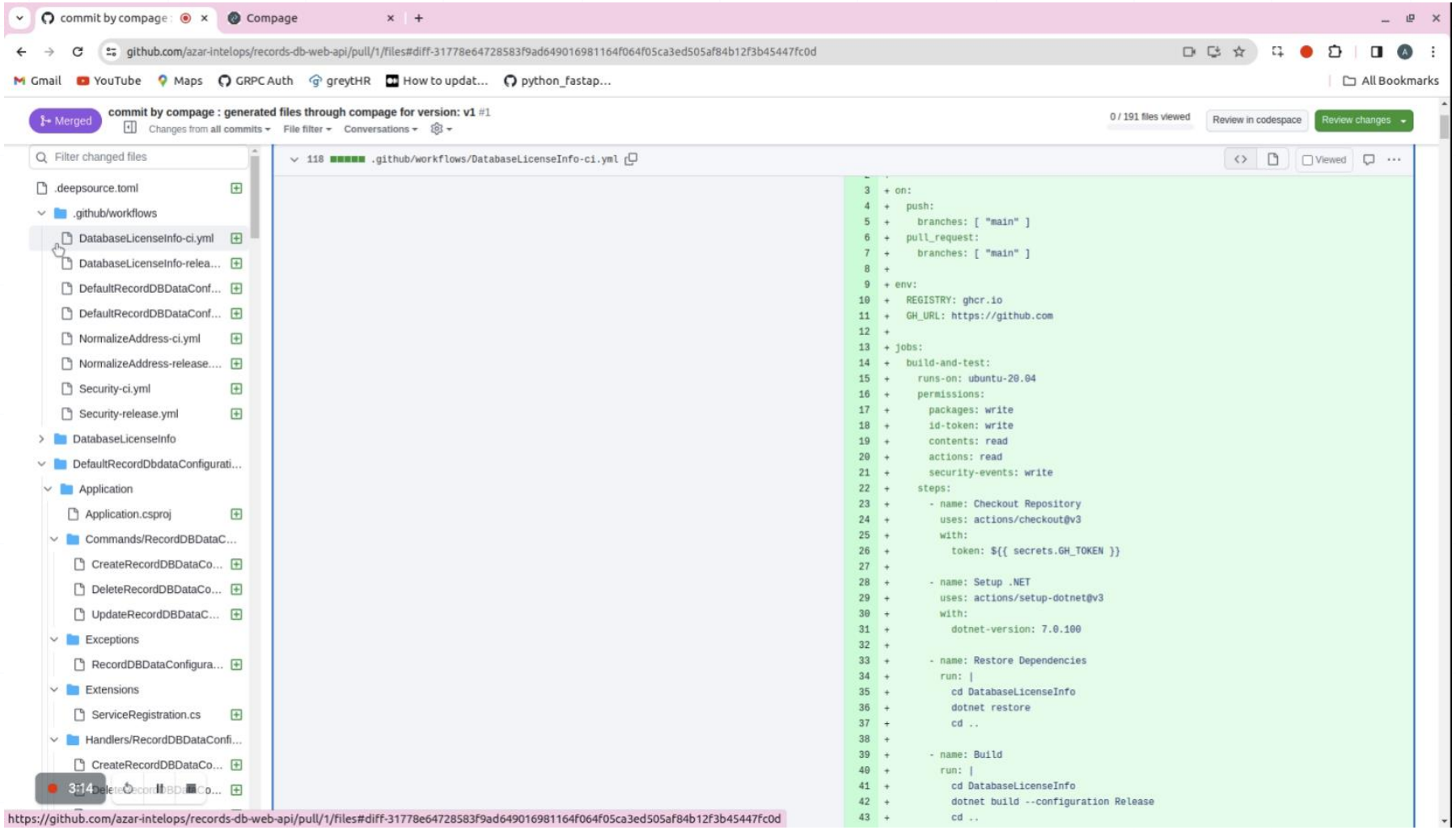
Input the Reqs



- Initialize a project, specifying its service name and associating it with a Git repository.
- Utilize Compage diagramming canvas to represent each microservice as a distinct node.
- Define specific requirements (such as programming language, database, and framework) within node properties to facilitate code generation.

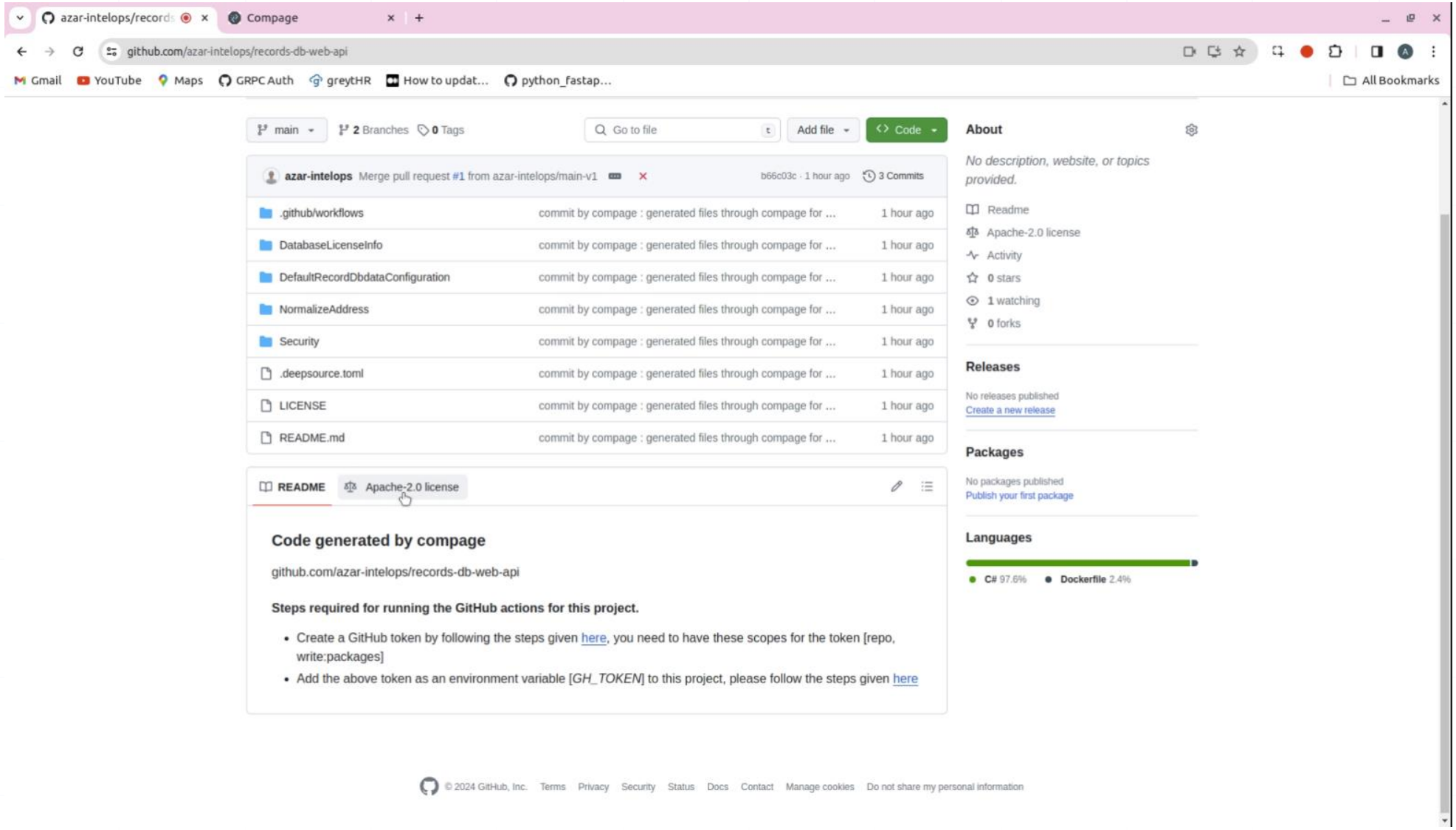
Generated Code

Along with code-base, Compage automatically creates CI/CD pipelines, containerizes applications, infrastructure manifests and offers a flexible, agnostic setup.



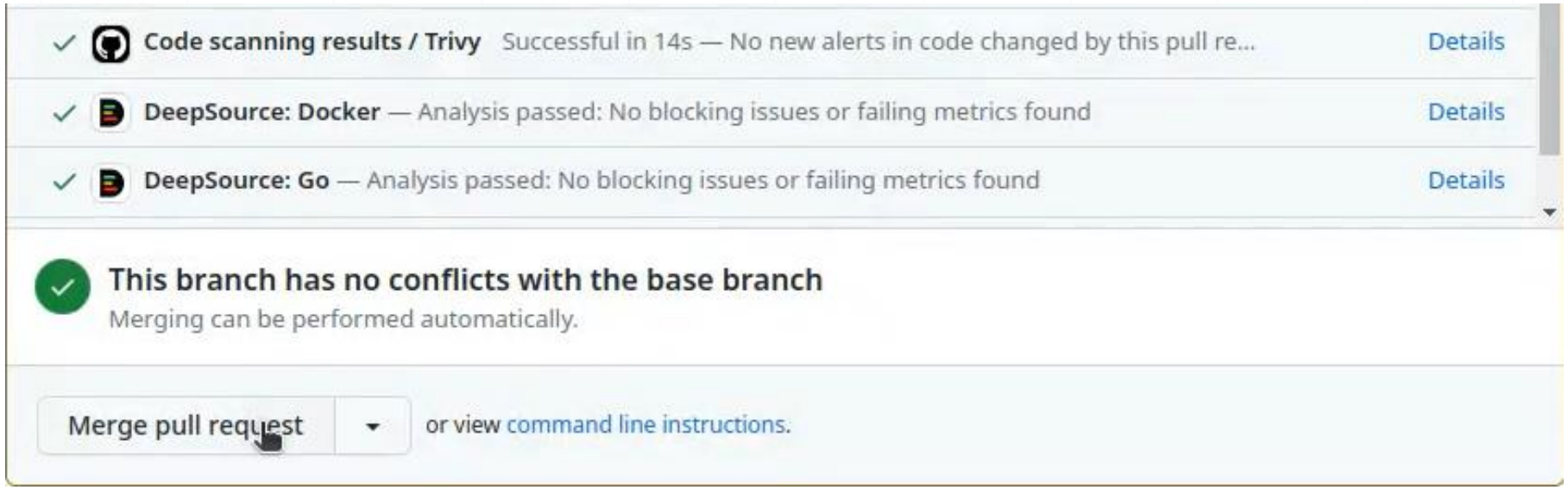
License Notice

Generated code is licensed as per your requirement,
use Compage to add your copyright notice, incorporating custom language in the language model.



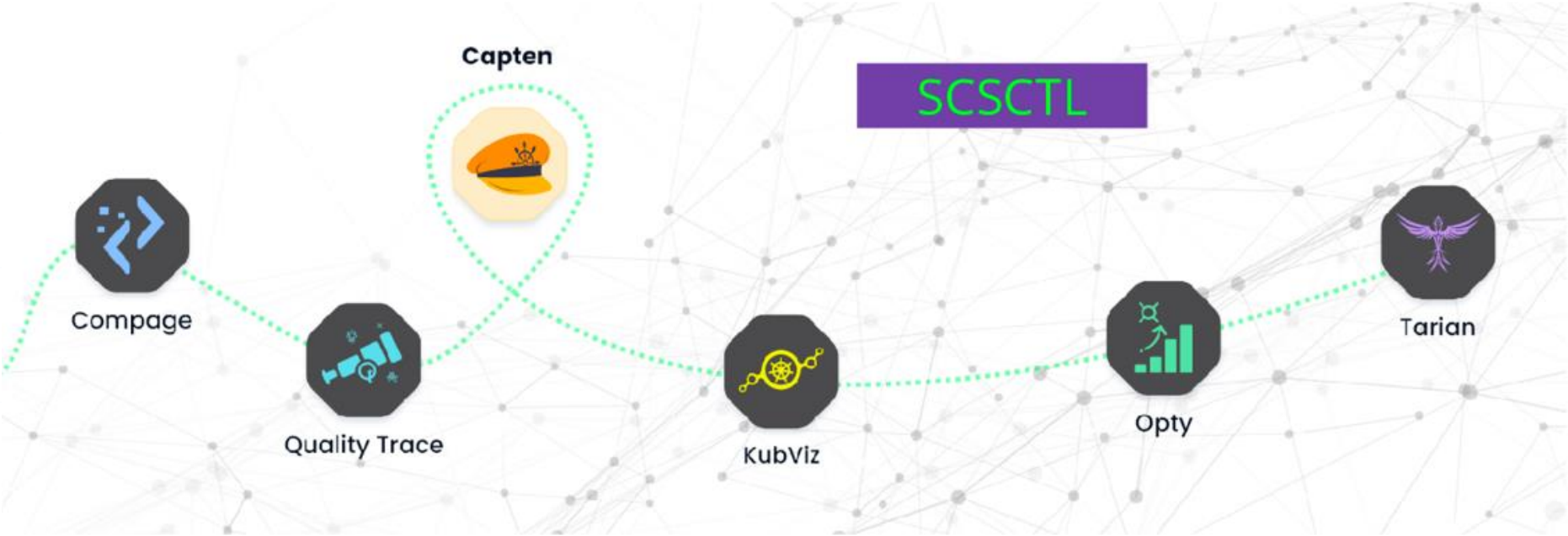
Security Standards and Updates

Compage team continuously updates the code generation dataset to feed that dataset to generation-engine, which helps to keep the generated code up-to-date with standards and security. The generated codebase is automatically pushed to your specified repository, complete with security scanning, containerization, dependency setup, and passed tests.



What more can Compage do?

Capten Stack - Built to ALWAYS Stay with You!



Dev | Ops | Sec

Take Aways

- Impact:
  - Hands-on Style
  - Jobs & Pay
  - Deliverables Expectations
  - Skills Expectations
  - Management Changes
  - New Job Roles & Responsibilities
- Advice:
  - Learning Approach
  - Strong with Fundamentals
  - Learning curve
  - Up Skilling
  - Understanding Business
  - Adding Value to Business

Connecting dots to the Context that was set in the beginning

New Services Approach:

SaaP (Service as a Platform or Service as a Product)

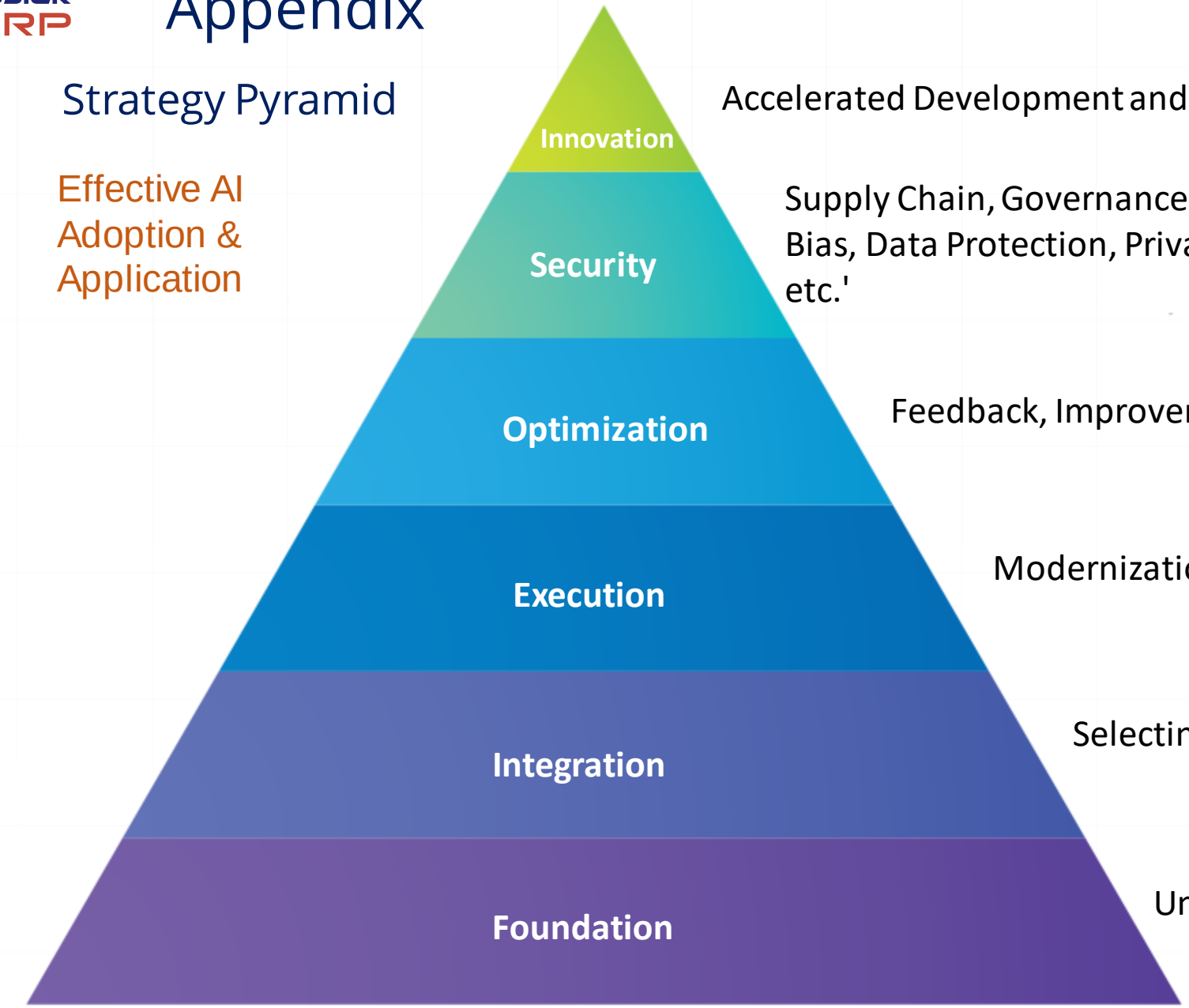
SaaP aliases:

- SaaS 2.0 (Service as a Software)
- SvaS or SviaS (Service via a Software)

Appendix

Strategy Pyramid

Effective AI Adoption & Application



Accelerated Development and Deployment

Supply Chain, Governance, Trust, Transparency, Fairness, Bias, Data Protection, Privacy, Compliance, Regulations, Risks, etc.'

Feedback, Improvement, and Scaling

Modernization and Process Automation

Selecting Tools and Ensuring Compatibility

Understanding, Assessment, and Training

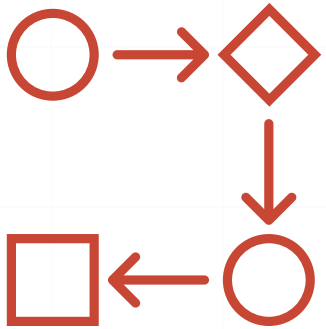
Appendix

Modernization Use Case

- **Dependencies:**
  - Complexity, Heterogeneity, Relationships between Services & Projects
- **Modernization Benefits:**
  - To Enhance Business Value
  - For Improved Security and Cost Efficiency
  - To Gain Competitive Edge
  - To Foster Business Innovation

Appendix

Modernization Use Case



- **Challenges:**
  - Documentation and Knowledge Gaps in Legacy/Monolith Apps
  - Skill Gaps and Securing Skilled Talent
  - Cost-Effective Strategies for Modernization
  - Adopting New Technologies Efficiently
- **Phases:**
  - **Planning Phase:** Strategy Development, Requirements Analysis, and Deciding What to Keep or Remove from the Existing Code Base
  - **Implementation Phase:** Employing Standard Approaches such as DevSecOps, Software Supply Chain Security, Ensuring Observability, Governance, Risk and Compliance (GRC), Trust, Transparency, and Addressing Copyright Issues.

Appendix

Modernization Use Case

App Modernization & Its Direct Relation to Infra Modernization:

- Difficulty in Aligning with Industry Standards: NIST, CIS, FIPS, Open API, Open Banking, and evolving financial and supply chain security standards.
- Integration with other business partners and security and privacy challenges
- Skills gap in the Finance domain

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Thank you!

Q & A

https://github.com/intelops
https://github.com/intelops/compage