

GitHub Copilot for Azure

4 – Week Proof of Concept

Modern software development requires speed, efficiency, and continuous innovation. However, developers often find themselves bogged down by repetitive coding tasks, time-consuming debugging, and the constant search for best practices. GitHub Copilot—an AI-powered coding assistant—boosts productivity by generating intelligent code suggestions, completing functions, and providing real-time guidance directly within the development environment.

Over a 4-week engagement, we'll evaluate your current development workflows and demonstrate how GitHub Copilot can enhance productivity. Through a tailored proof of concept, we'll showcase the power of AI-driven code assistance across key areas such as application development, modernization, cloud-native development, and DevOps automation.

Tech Stack:

Our engagement will include services, such as:

- **AI-Powered Code Assistance:** Leverage GitHub Copilot to streamline coding, automate repetitive tasks, and enhance developer productivity with context-aware suggestions.
- **Cloud-Native Development:** Utilize Copilot to accelerate Cloud native development such as Azure Functions, Logic apps, batch jobs, API Gateway policy code development and serverless computing by generating optimized, scalable code.
- **DevOps (CI/CD):** Integrate Copilot with Azure DevOps, GitHub Actions, and CI/CD YAML pipelines development, workflow automation, and deployment processes assistance.
- **Infrastructure as Code (IaC):** Improve efficiency in Infrastructure as a Code development with ARM templates, Bicep, and Terraform by leveraging AI-assisted code generation with GitHub Copilot.

SNP's GitHub Copilot solution enhances developer productivity by streamlining software development, automating Azure workflows, and accelerating cloud-native app deployment—all while ensuring adherence to robust coding best practices.

- Improved Developer Productivity
- Enhance Code Quality
- Seamless Integration with IDEs
- Future-Ready Development

With GitHub Copilot , you can supercharge your development workflows across key areas:

- **Accelerate application development & increase productivity:** GitHub Copilot provides context-aware code completions, reducing manual coding effort and enabling developers to focus on architectural decisions and business logic instead of syntax and boilerplate code.
- **Accelerate cloud native development:** Leverage GitHub Copilot to develop Azure Functions, batch jobs, logic apps and Infrastructure as Code to ensure faster and more efficient cloud-native solutions.
- **Enhance DevOps & automation:** Simplify Azure DevOps Pipelines development, workflow automation and seamlessly integrate Azure Security & Compliance best practices with AI-powered code suggestions.
- **Facilitate rapid prototyping & experimentation:** Developers can quickly iterate, prototype, and test different coding approaches, making it easier to explore new cloud services, development frameworks, and development methodologies.

Our 3-step approach will cover:

Step 1: Discovery

SNP will closely work with development teams and SMEs to understand the software development landscape, workflows, and tooling to identify opportunities for AI-powered coding assistance to enhance productivity, streamline DevOps process, and improve overall software quality. The key steps for discovery include:

- Identify the programming languages, frameworks, and tools used to ensure GitHub Copilot integration into the development environment.
- Analyze code consistency, best practices to be followed to leverage GitHub Copilot to enhance code quality and reduce redundancy.
- Review current coding standards, repositories, and CI/CD pipelines to find areas where GitHub Copilot can improve efficiency and consistency.
- Evaluate security standards to be followed to leverage GitHub Copilot to improve the security posture to meet the regulatory standards.
- Understand requirements on IaC implementation, Azure DevOps Pipelines, and GitHub Actions towards automation opportunities where GitHub Copilot can be utilized to improve the efficiency.
- Analyze API development patterns and SQL development areas to leverage GitHub Copilot to improve the efficiency, write optimized queries, add comments, and generate documentation.
- Explore opportunities in code merging and conflict resolution with GitHub Copilot.
- Explore opportunities in code coverage with GitHub Copilot that can generate unit test cases to improve the coverage.
- Evaluate cross-platform development (mobile, web, cloud) areas where GitHub Copilot can provide consistent, compatible coding solutions across platforms.
- Evaluate error handling and logging strategies to identify how GitHub Copilot can standardize error handling, exception handling, and improve debugging and issue tracking efficiency.

Step 2: AI-Assisted Development with GitHub Copilot

- Implementation of AI assisted development and automate boilerplate code generation to improve the productivity.
- Integration of GitHub Copilot into the developer IDEs such as Visual Studio, JetBrains, Xcode and Azure Data Studio.
- Leverage GitHub Copilot to provide real-time, context-aware code suggestions, improving code quality and reducing errors.
- Integrate GitHub Copilot in Cloud native solution development pertaining to the Cloud Solution Architecture.
- Integrate with Azure DevOps Pipelines, while using GitHub Copilot to optimize CI/CD workflows with Azure DevOps and GitHub Actions.
- Integrate Copilot into the code review process, offering automated suggestions to ensure adherence to coding best practices.
- Enable AI to identify coding issues, bugs, or vulnerabilities, speeding up debugging and improving code reliability.
- Utilize GitHub Copilot to generate unit tests, increasing test coverage and ensuring more reliable applications.
- Leverage GitHub Copilot for generating code comments and documentation for code, making it easier to maintain and understand.
- Integrate AI with Cloud Security Center to identify and resolve security vulnerabilities during development, ensuring secure coding practices in cloud-native apps.
- Use GitHub Copilot to manage dependencies, recommend updates, and resolve package conflicts, ensuring secure and up-to-date projects.
- Integrate GitHub Copilot with tools like SonarQube/ESLint to auto-suggest fixes for code quality, enforce best practices, and identify vulnerabilities.

Step 3: Deliverables and Knowledge Transfer

- GitHub Copilot integration documentation.
- Track GitHub Copilot's impact on code quality and performance.
- Provide metrics with respect to the developer productivity and efficiency.
- Train teams for effective use of GitHub Copilot.
- Document integration of GitHub Copilot with IDEs Visual Studio, JetBrains, Xcode and Azure Data Studio.
- Provide knowledge transfer to development teams.
- Demonstrate Copilot's role in cloud native development and Infrastructure creation.

About SNP Technologies Inc.

SNP Technologies Inc. is a trusted Microsoft Solutions Partner, empowering businesses to thrive in a cloud-first world. We specialize in **Azure cloud infrastructure, security, data and AI, and modern workplace solutions**, delivering transformation through a **customer-first approach** and **deep Microsoft expertise**.

Supported by globally recognized **ISO certifications in IT Service Management, Information Security, and Business Continuity Management**, SNP ensures that innovation is never achieved at the expense of security or stability.

Our capabilities are further enhanced by **multiple Microsoft Specializations**. Combined with our passion for solving complex challenges, these specializations enable SNP to deliver **tailored, scalable solutions** that drive agility, strengthen security, and accelerate business outcomes.



Specialist
 Azure VMware Solution
 Networking Services
 Infra and Database Migration
 Azure Virtual Desktop



Specialist
 Cloud Security
 Information Protection and Governance
 Threat Protection

Member of
Microsoft Intelligent Security Association




Specialist
 Kubernetes on Azure
 AI Platform on Microsoft Azure
 Migrate Enterprise Applications to Microsoft Azure
 Accelerate Developer Productivity with Microsoft Azure
 Build AI Apps on Microsoft Azure



Specialist
 Data Warehouse Migration
 Kubernetes on Azure
 Analytics
 AI Platform on Microsoft Azure
 Infra and Database Migration
 Migrate Enterprise Applications to Microsoft Azure
 Build AI Apps on Microsoft Azure



TÜV NORD CERT GmbH
ISO/IEC 20000-1
 tuev-nord.de



TÜV NORD CERT GmbH
ISO/IEC 27001
 tuev-nord.de



TÜV NORD CERT GmbH
ISO 22301
 tuev-nord.de

AWARDS & RECOGNITION:



2024 FINALIST MSFT AMERICAS PARTNER OF THE YEAR
 Infra & App Innovation



2023 PARTNER OF THE YEAR FINALIST
 Security



2021 MSUS PARTNER OF THE YEAR WINNER
 Business Excellence in Solution Assessments



2019 MSUS PARTNER OF THE YEAR WINNER
 Intelligent Cloud & OSS on Azure



2019 PARTNER OF THE YEAR FINALIST
 Open-Source Applications & Infrastructure on Azure



2018 US SI PARTNER OF THE YEAR WINNER
 Solution Innovation on Microsoft Azure Award

Let's move forward together with confidence. We're here to help at every step.

Email us: SNP's CEO Prakash Parikh: prakash@snp.com