



WHY CODE SOLO WHEN YOU CAN BE MORE PRODUCTIVE WITH A GITHUB CO-PILOT

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GOALS

- Understand Github Copilot
- Learn benefits of using the tool and how to get started
- Understand concerns about AI and source code

ABOUT ME

- Mike Douglas
- Solution Consultant and VP Digital Consulting – Engineering at Lunavi
- Microsoft MVP – Developer Technologies – DevOps
- Organizer of Omaha DevOps Meetup
- Competitive Robotics Club Coordinator for 7th – 8th Graders
- @mikedouglasdev on twitter

WHAT IS GITHUB COPILOT?

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- Let's take a look first
- Intellisense and code complete technology has continued to improve and begin incorporating IA to help you get to your most used and relevant options
- GitHub Copilot is an AI pair programmer that offers auto complete style suggestions
- Start by using code or comments
- Optimized for Python, JavaScript, TypeScript, Ruby, Go, C#, or C++

HOW DOES IT WORK?

- Open AI Codex
 - Machine learning model
 - Translates natural language into code
 - Draws context from comments and code to suggest
 - Codex is a version of GPT-3 (Generative Pre-trained Transformer 3) fine tuned for programming tasks
 - Other examples using GPT-3 – Duolingo for grammar correction
- Trained on public code
 - Source code and natural language
- Understands multiple language but English is the best since most source code is in English

WHAT DOES IT COST?

- Verified Students, Teachers, and maintainers of Popular Open Source
 - Free
- Closed Source / Private Repos
 - 60 Day free trial
 - \$10 / month or \$100 / year – individual license
 - Working on “for companies” license

IS IT SAFE TO USE?

- Who owns the code generated by Copilot?
 - You do. Copilot doesn't own the code it generates
- Can there be any issues with the code generated?
 - Yes, you should test the code and follow normal testing including checking for security vulnerabilities
- Will there be personal / copywrite data revealed?
 - There shouldn't be. It is a very small percentage of getting an exact match of the model
- Will it prompt me with offensive suggestions?
 - Uses filters to prevent

WHAT ABOUT PRIVACY?

- There are choices for data collection
- Required
 - Pseudonymous identifies and general usage data

GitHub Copilot

Suggestions matching public code *

GitHub Copilot can allow or block suggestions matching public code. See [GitHub Copilot FAQ](#) to learn more.

 

☒ **Allow GitHub to use my code snippets for product improvements ***

Allow GitHub and its affiliates to use my code snippets to research and improve GitHub Copilot suggestions, related models and product features. More information in [Privacy FAQ](#).

WHAT ABOUT PRIVACY?

- Will my company's private code be shared?
 - It will not be shared to others as suggestions
 - Will use my source code to make other recommendations within the project formme
 - Data on whether suggestion is accepted / rejected will be used to improve model
- Adjust user settings <https://github.com/settings/copilot>
- Additional - <https://github.com/features/copilot/#what-data-does-github-copilot-collect>

IS THIS THE END OF DEVELOPERS?

- “CO” in “Copilot”
- No, still requires human to interpret, fix, connect with other code

GETTING STARTED

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- VS Code Install
- Other IDEs – Visual Studio, Neovim, JetBrains IDEs
- Install VSCode
- Install from VSCode Marketplace
- Sign in to GitHub to start your trial



MORE DEMOS

DEMOS LIST

- Get day of week from date
- Dictionary of 2 letter country codes
- Call open weather map API
- What is the answer to life, the universe, and everything?
- Call Petstore API
- Build a tic tac toe game in Javascript
- Identity most picked Powerball numbers