

# AN INTRODUCTION TO THE SWIFT PROGRAMMING LANGUAGE



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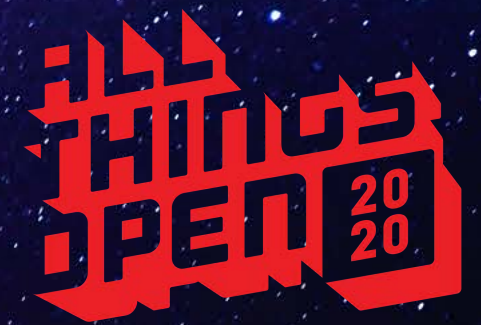
@TimirahJ



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t. sleep. code.





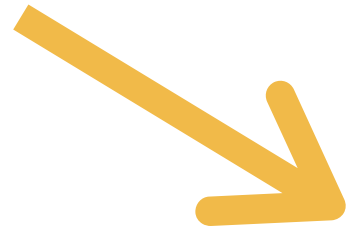
# So let's jump right in!



**Swift**  **Est. 2014**



**Beginners**



# Initializing: Obj-C vs. Swift

## Obj-C

```
Person *myFriend = [[Person alloc] init];
```

```
Person *myFriend = [[Person alloc] initWithName:@"Ted"];
```

## Swift

```
let myFriend = Person()
```

```
let myFriend = Person(name: "Ted")
```

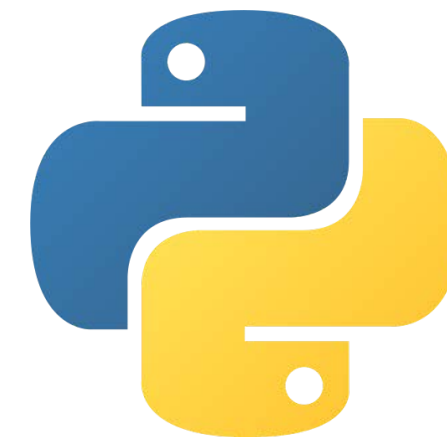
# Catchy Syntax



```
var name = "Jacob"
```



```
var name = "Jacob";
```



```
name = "Jacob"
```



# Interoperability

Some Python code like this:

```
import sys

print(f"Python {sys.version_info.major}.{sys.version_info.minor}")
print(f"Python Version: {sys.version}")
print(f"Python Encoding: {sys.getdefaultencoding().upper()}")
```

Can be implemented in Swift through PythonKit with the following code:

```
import PythonKit

let sys = try Python.import("sys")

print("Python \(sys.version_info.major).\\(sys.version_info.minor)")
print("Python Version: \(sys.version)")
print("Python Encoding: \(sys.getdefaultencoding().upper())")
```

✔ **Prevents Huge Memory Leaks**

✔ **Faster Performance**



# ***Optionals ?!***

Checks for and protects values when compiling.

**var username: String!**

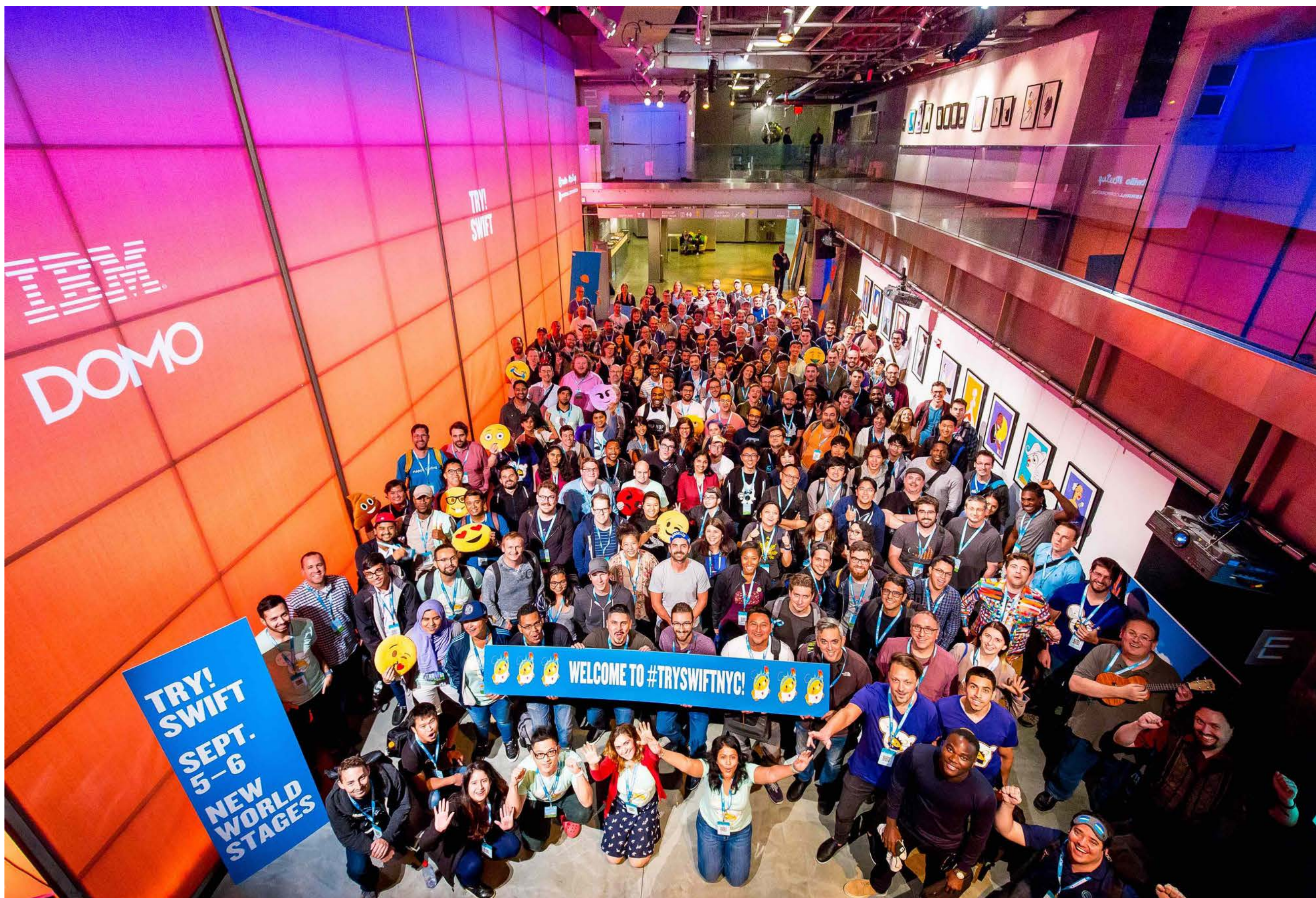
**var followers: Int?**

# Then, in 2015...



## Open Source







The screenshot shows the GitHub repository page for 'apple/swift'. At the top, the repository name is displayed with icons for Watch (2.6k), Unstar (53k), and Fork (8.5k). Below this, navigation tabs for Code, Pull requests (484), Security, and Insights are visible. The main content area shows a list of recent commits, including a merge pull request from 'mikeash/fix-concurrenthashma...' and several other commits with their descriptions and timestamps. On the right side, there is an 'About' section with the repository description 'The Swift Programming Language', a link to 'swift.org', and a 'Readme' link. Below that, the 'Releases' section shows '1,677' releases and a 'Swift 5.2.5 Release' button labeled 'Latest'.

apple / swift

Watch 2.6k Unstar 53k Fork 8.5k

<> Code Pull requests 484 Security Insights

master 320 branches 1,677 tags Go to file Add file Code

swift-ci Merge pull request #33615 from mikeash/fix-concurrenthashma... a350fb7 8 minutes ago 110,408 commits

.github	Update PR template to use autolinking feature	10 months ago
apinotes	[CMake][NFC] Introduce component targets for proper dependency t...	12 months ago
benchmark	Add a benchmark for protocol conformance testing.	10 days ago
bindings/xml	[Markup] Print Tags in documentation comment XML	3 years ago
cmake	Start using optimization (-O0/-O2/-O3/-Os) and debug (-g) flags fro...	7 days ago

About

The Swift Programming Language

swift.org

Readme

Apache-2.0 License

Releases 1,677

Swift 5.2.5 Release Latest

- **800+ Contributors**
- **100k+ Commits**
- **1600+ Releases to date**
- **8.5k Forks**
- **500 Pull Requests**





# Server-Side Swift

- *Transcend beyond "just Apple", and into the serverless realm*
- *Multiple IDEs (Xcode, Sublime, Atom, CodeRunner)*
- *Adding End-to-End Capabilities*





# Swift vs. Your Favorite Backend Language





# Performance

Swift vs. **Node.js**

Swift vs. **Ruby**



[https://benchmarksgame-  
team.pages.debian.net/benchmarksgame](https://benchmarksgame-team.pages.debian.net/benchmarksgame)

Swift vs. **Java**

# Top 10 Language to learn

**What are *your* priorities  
as a developer?**



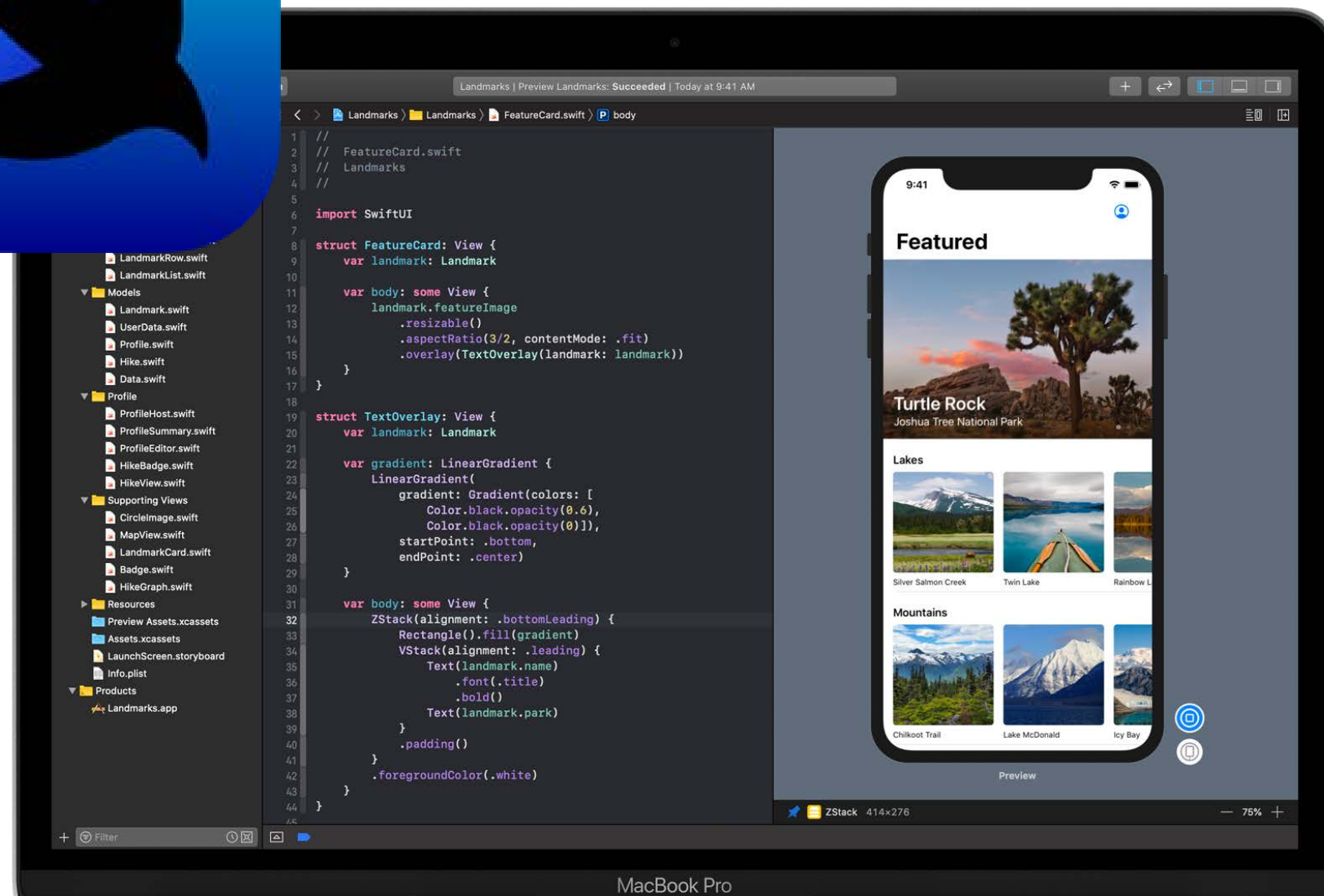
# The Future of Swift...

- Easier to read
- Growth in Open Source
- More performant + type-safe
- Server-side
- Microservices
- Containerization

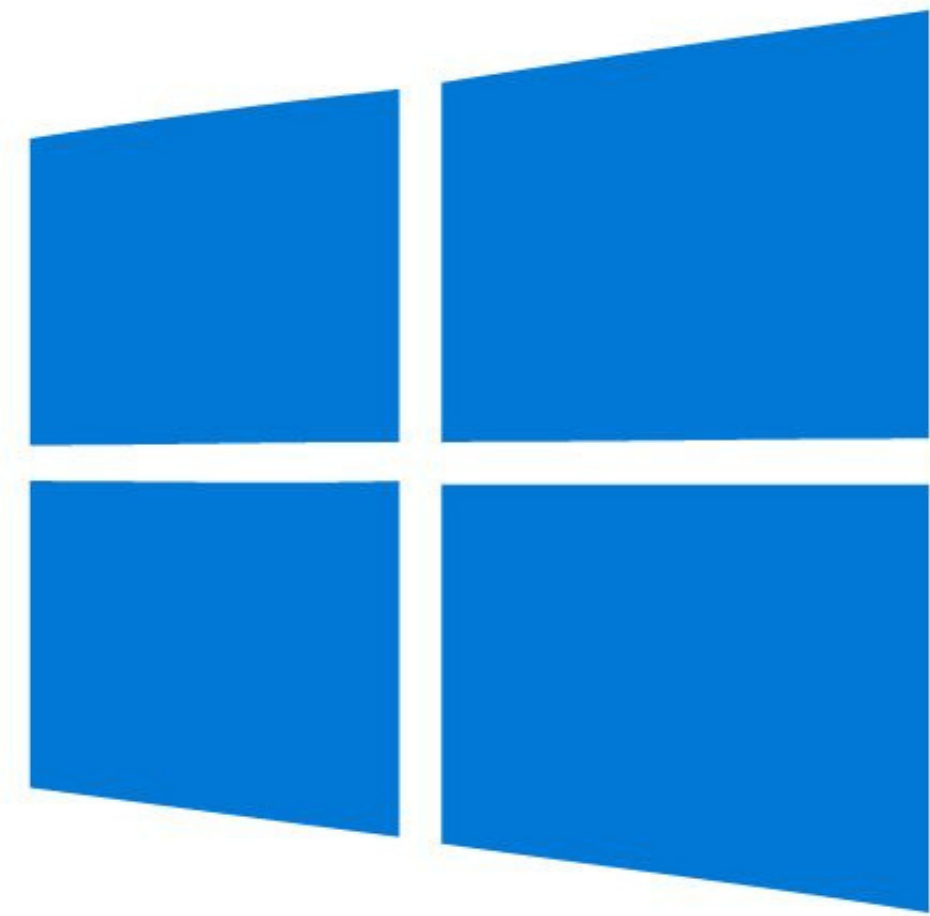
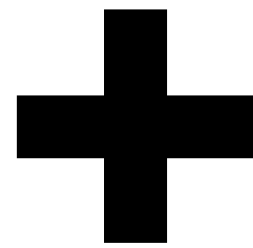


# SwiftUI

A popular new declarative framework released with iOS13 used to create user interfaces in Swift.



# Swift for Windows

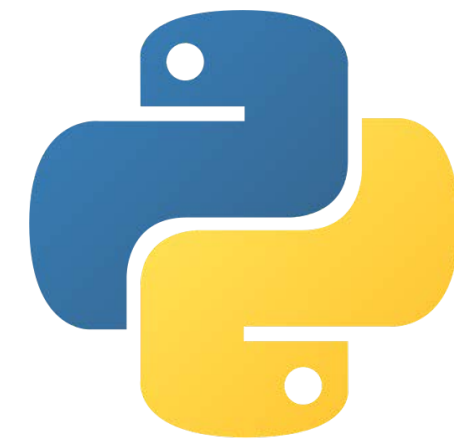




***How relevant is Swift  
in the industry?***

# Machine Learning

ML



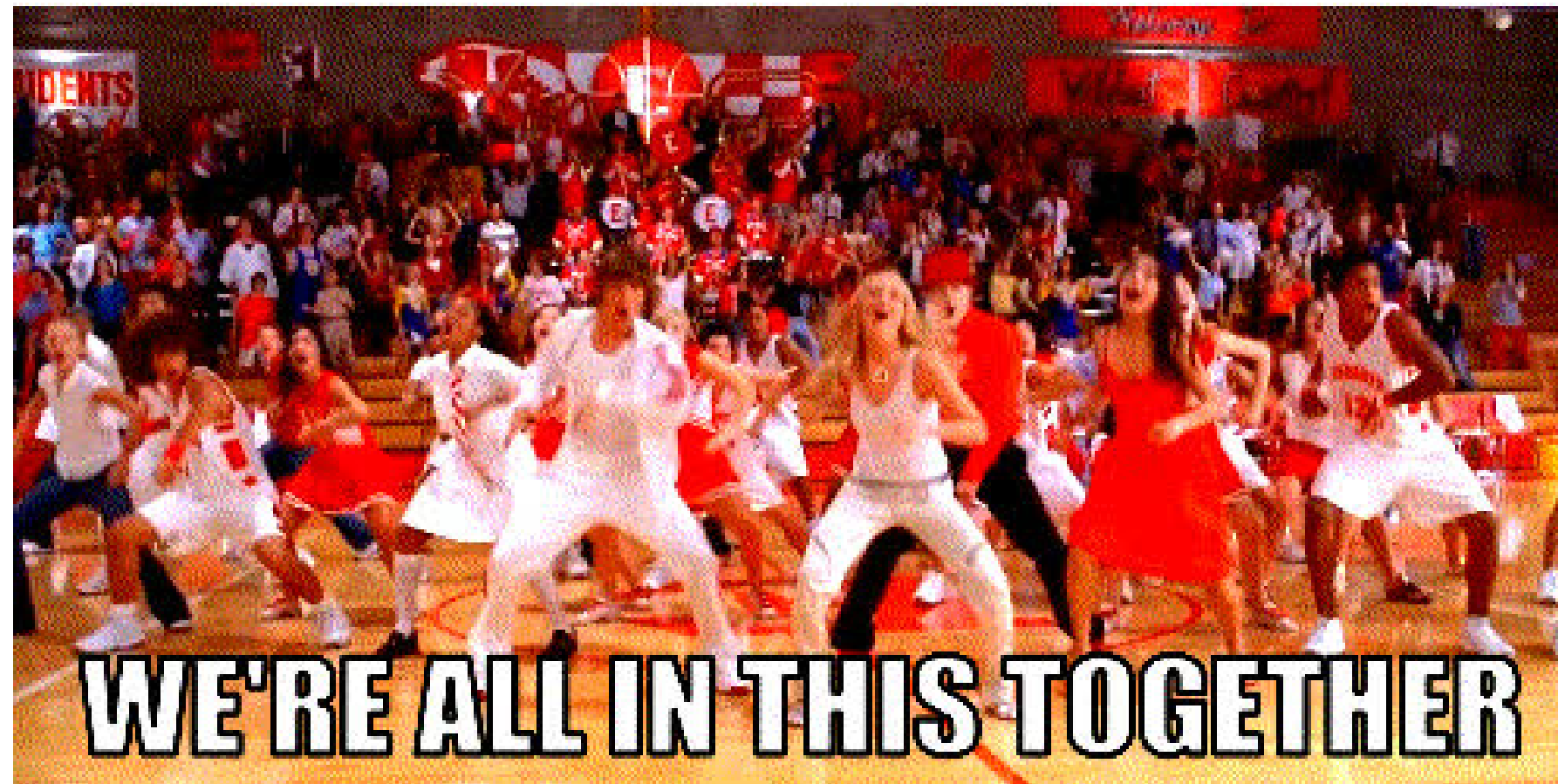
**VS.**





# ***Swift for Tensorflow***





✓ **iOS Devs**

✓ **Backend Devs**

✓ **Mid-level Devs**

✓ **DevOps Engineers**

✓ **Senior Devs**

✓ **Junior Devs**

✓ **Front-End Devs**

✓ **Data Scientists**



**What are *your* priorities  
as a developer?**

# **Learn More + Get Started!**

- **Swift.org**
- **Apple Documentation**
- **RayWenderlich.com**
- **HackingWithSwift.com**
- **O'Reilly**

**Top 10 Language to learn...**

**2021 and beyond!**



# THANK YOU.



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Slides Available:

[github.com/timirahj/AllThinsOpen2020](https://github.com/timirahj/AllThinsOpen2020)

