

# Nathan Lanza

IOS DEVELOPER · PHYSICIST

San Francisco | Los Angeles | Florida | Colorado

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## Education

### Florida Atlantic University

*Boca Raton, Florida*

M.S. IN PHYSICS

*Jan. 2015 - Dec. 2015*

- PhD candidate in the field of Loop Quantum Gravity.
- Research on the path integral formulation of quantum gravity (called spin foam theory) and the coupling of fermions to quantum gravity.

### Codepath

*San Francisco, Ca*

IOS FOR ENGINEERS CLASS

*Oct. 2016 - Present*

- Eight week iOS course for experience software engineers to improve their iOS development abilities.

### Hack Reactor - Mobile Makers

*San Francisco, California*

IOS BOOTCAMP

*Jan. 2016 - Mar. 2016*

- Full-time, eight week intensive iOS development course.
- Covered both Swift and Objective-C. Included protocol-oriented programming, generics, optionals, functional programming and more.
- Frameworks studied included UIKit, Foundation, CoreData, CloudKit, Firebase, Azure, NSOperation, GCD, MapKit, CoreLocation, CoreMotion, and others.
- Top student throughout the entire course as evaluated by peers and instructors.

## Experience

### Bestie Inc.

CONTRACTED IOS APP

- Social matchmaking app.
- Contracted to develop the entire project.
- Application uses coordinator pattern, programmatic Auto Layout, Firebase, RxSwift, RxCocoa, JSQMessagesController, FacebookSDK and Alamofire.
- Currently in MVP state with founders testing on friends and family.

### nWorkout+

[HTTPS://GITHUB.COM/NATHANLANZA/WORKOUTLOG](https://github.com/nathanlanza/workoutlog)

- iOS app written in Swift. Responsible for entire project. Will be published to the App Store in the coming weeks.
- Version one used Core Data for storage. Custom protocols, delegates and helper classes were written to facilitate better code organization around the schema.
- Version two upgraded to Realm with RxSwift due to the numerous advantages Realm offers over Core Data including performance and the fact that Realm uses modern Collection conforming classes while Core Data uses antiquated types such as NSMutableOrderedSet.
- Entire app is storyboard-less: all View Controllers and navigation are instantiated via code enabling generic ViewControllers for the most efficient code reuse.
- Makes extensive use of generics, protocols, protocols with associatedtypes, type-erasure, protocol extensions, do/try and many other Swift features.
- Uses container, MVC and MVVC patterns, GCD, custom keyboard, programmatic constraints.

### nBack

[HTTP://WWW.LANZA.IO/PORTFOLIO/NBACK](http://www.lanza.io/portfolio/nback)

- Available on App Store [here](#).
- iOS app written in Swift. Responsible for entire project. Mental exercise that research has shown to improve working memory.
- Uses Core Data to store gameplay history. Utilizes custom protocols, delegates and helper classes that were written to facilitate better code organization around the schema.
- Entire app is storyboard-less. Utilizes the Coordinator pattern to better organize code and to relegate navigation and View Controller management to a more proper location in the code. View Controllers
- Makes use of generics, protocols, protocols with associatedtypes, protocol extensions, do/try and various other Swift features.

## nTip+

[HTTP://WWW.LANZA.IO/PORTFOLIO/NTIP](http://www.lanza.io/portfolio/ntip)

- Available on App Store here.
- iOS app written in Swift. Tip calculator.
- Locale aware to utilize proper currencies.
- Uses Core Data to store your bill history.

## Blend Chat

[HTTP://WWW.LANZA.IO/PORTFOLIO/BLEND](http://www.lanza.io/portfolio/blend)

- iOS app written in Swift. Responsible for backend.
- Wrote the backend with Firebase, Azure and CloudKit as a test of their capabilities before the project manager ultimately decided to stay with Firebase.
- Included AFNetworking, FacebookSDK and Google FirebaseUI.
- Coded much of the apps structure and laid out the MVC hierarchy for the other more UI centric developers.
- Was responsible for cleaning, organizing and maintaining the code written by the other developers.
- Was in charge of the git repository and handled all merges and conflicts.

## TableViewCellWithTableView

[HTTPS://GITHUB.COM/NATHANLANZA/TABLEVIEWCELLWITHTABLEVIEW](https://github.com/NathanLanza/TableViewCellWithTableView)

- Framework which contains a UITableViewCell with an embedded UITableView in the contentView.
- Written for the nWorkout+ app but noticed a lack of a publicly available solution and a need for one.
- Will be available on CocoaPods in the coming weeks.

## Pascal Compiler

[HTTPS://GITHUB.COM/NATHANLANZA/PASCAL-COMPILER](https://github.com/NathanLanza/Pascal-Compiler)

- Early stage command line Pascal compiler translated to Swift. Original source is in Java.
- Educational side hobby to learn compilers/interpreters.

## Honors & Awards

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### PHYSICS

- 2013 **Undergraduate Award in Physics**, Scholarship for excellence in physics.
- 2013 **Dean's Award in Science**, Scholarship for excellence in science.

FAU

FAU

## Writing

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<http://www.lanza.io>

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SWIFT AND IOS BLOG

Jun. 2016 - PRESENT

- Write educational blogs about various topics in Swift and iOS programming.