

# Andreas Neusüß

## About Me

*I am a passionate, bright and enthusiastic developer looking to make a difference in the world. I enjoy working in a team and I am passionate about learning.*

*I was awarded with a WWDC scholarship and graduated in 2018.*

## Info

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## Skills

- ▶ *Developing for Apple platforms since 2013*
- ▶ *Swift since 2014, Objective-C since 2013*
- ▶ *Active presence on GitHub*
- ▶ *Blogging about iOS Development*
- ▶ *C++, Java and Arduino through various university projects*
- ▶ *Mechanical engineering, computer science and medicine due to mechatronics major, various additional voluntary courses*



## Education

○ 11/2018

University – Ilmenau University of Technology:  
Mechatronics M.Sc.  
final grade: 1.5 (GPA: 3.5)

○ 03/2017

University – Ilmenau University of Technology:  
Mechatronics B.Sc.



## Work and Projects

○ Working at „ING“ since 01/2019

- ▶ ING is Germany's third largest bank.
- ▶ The iOS app for customers' stocks and securities started as a minimal viable product when I arrived.
- ▶ Now over 25% of the entire bank's trades are made through the app.
- ▶ I coordinate the effort for new features such as charts or the order-manager and I am responsible for their implementation on iOS.
- ▶ Beside the new features we managed to integrate major refactorings, re-writes and re-designs into our work.
- ▶ As the team grows I am in charge of getting new colleagues up to speed and mentoring junior developers.
- ▶ Writing secure, correct and testable code is crucial for the high security standards of a bank.
- ▶ I am still learning a lot about working in a diverse, multinational team on a product used by millions of customers.

○ Awarded with WWDC18 student Scholarship

- ▶ My project teaches the basics of color representation.
- ▶ The user can interact with a custom color picker and experience the surroundings using the device's camera. Thereby one can compare the capabilities of the sRGB to the P3 color space.
- ▶ While the user learns about colors I learned how to develop custom CIFilters.

○ Master Thesis at Fraunhofer IDMT

- ▶ I developed a framework that measures the drowsiness level of a driver while operating a vehicle.
- ▶ It utilizes multiple sensors that are connected to the smartphone as well as its internal camera.
- ▶ Collecting and combining multiple indications of fatigue enables the app to warn the driver when the risk of micro-sleep rises.
- ▶ Using a smartphone for live in-car analysis has not been described in literature up to this point.
- ▶ I was able to consolidate and expand my knowledge of image-processing, multithreading and C++ since the entire framework is written in it.
- ▶ Several statistical techniques are implemented in an efficient way and thus I also learned a lot about efficient algorithms and data structures.

## Localization-Editor

- ▶ Tool for viewing the localization files of an Xcode project. Makes it easier for the developer to see missing translations or update existing ones. I wrote the parser that transforms .strings files into model objects. The challenge was to accommodate for different styles of the files like the position of comments.

## Charts-Tear-down

- ▶ I wrote a tear-down about how the app "TradeRepublic" must have build their amazing charts. I also wrote a detailed blogpost about it.

## Feedback-Controller

- ▶ Wrapper that makes it easier to provide haptic feedback to the user by using the iPhone's TapticEngine.

## Async

- ▶ A Swift project to make chaining asynchronous tasks easier.

## Go-APNS

- ▶ A small project written in Go that provides an interface to send push notifications to Apple's system using HTTP2.

## Bachelor Thesis and Internship

- ▶ iPad app that is used to control ambient lighting in Audi vehicles so that coworkers can test the components more quickly.
- ▶ The app is fully integrated in the CAN-Bus network of the car.
- ▶ The main objective was to find and profile algorithms to process arriving data efficiently.
- ▶ It is mostly written in Swift and C to communicate with POSIX network APIs.
- ▶ I learned about network and Bus protocol design, handling and filtering real-time data, profiling algorithms as well as building modular software architectures.

## App: ClubNews

- ▶ An iOS and Android app developed in a team of two students.
- ▶ At my university it was common to inform people about upcoming events using flyers and posters.
- ▶ ClubNews enables students to be informed and participate in local events without having to catch, read and remember that printed advertisements.
- ▶ It became the go-to app when it comes to planning an evening.
- ▶ I focused on the user facing parts and was involved in backend design decisions.
- ▶ I learned many things about marketing, took a deep dive into design and the tools to implement it like UIKit and CoreAnimation. I also tried out Android development and broadened my Java knowledge.

## App: TourTime

- ▶ The app uses geofencing technology to keep track of how much time one spent during commutes or journeys.
- ▶ Once start and destination locations are configured, the iPhone does the job of starting and stopping the time automatically.
- ▶ It is completely written in Objective-C and was released in 2014.
- ▶ I learned a lot about iOS frameworks like CoreAnimation, CoreLocation, MapKit, UIKit and its interactive UIViewControllerTransitioning.