

BANGHUA ZHAO

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SUMMARY

- Proficient in programming with hands-on experience in Swift, Objective-C, Java, Python, Dart, JavaScript, and C.
 - Expert in iOS development using SwiftUI, MVVM, Swift Concurrency, unit testing, and clean architecture.
 - Skilled in front-end development with familiarity in HTTP/TCP/UDP/IP protocols, HTML/CSS, and JavaScript.
 - Strong foundation in computer science, particularly in operating systems and computer networking.
 - Self-motivated and good communication skills with the ability to work in an agile environment
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EDUCATION

Purdue University , West Lafayette, IN, USA	01/17 – Current
Ph.D. in Aeronautics and Astronautics Engineering, Structures & Materials	GPA: 3.85/4.0
Purdue University , West Lafayette, IN, USA	01/15 – 12/16
M.S. in Aeronautics and Astronautics Engineering, Structures & Materials	GPA: 4.0/4.0
Beihang University , Beijing, China	09/10 – 06/14
B.E. in School of Astronautics, Spacecraft Design and Engineering	GPA: 3.4/4.0

EXPERIENCE

- Senior iOS Engineer, MEGA The Privacy Company**, Auckland, New Zealand **05/23 – Current**
- Developed core features for MEGA Chat/Meeting, including the implementation of a waiting room, and modularized 10+ domain/repositories into ChatRepo.
 - Quickly integrated into the MEGA Password Manager team, collaborating effectively within the Scrum team to spike and develop key features like Autofill.
 - Implemented clean architecture (SwiftUI + MVVM), achieving over 90% code coverage in the domain layer through comprehensive unit tests, and demonstrated proficiency in Mock and dependency injection.
 - Adopted Targeted SWIFT_STRICT_CONCURRENCY, ensuring that 10+ domain/repository/ViewModel components are sendable.
 - Collaborated closely with the Android team to optimize app launch time, using os_signpost and Instruments to collect and analyze iOS launch time statistics.
 - Gained hands-on experience with CI/CD using Fastlane for MEGA Password Manager, improving development and testing efficiency.
- Senior Engineer, Huawei Technologies Co., Ltd**, Dongguan, China **05/20 – 05/23**
- Developed 3 iOS Fintech apps (KBZ Pay, telebirr, AsiaPay) using Objective-C/Swift, ensuring high-quality delivery with zero major defects.
 - Led the iOS development team, establishing an Objective-C Style Guide, and conducting code reviews to maintain clean code across the team.
 - Introduced MVP/MVVM/Mediator design patterns for the iOS baseline project, and successfully refactored 6 major business modules using CJMediator and MGJRouter
 - Optimized app launch time by over 20% and resolved 10+ UI lag issues using Instruments. Leveraged Firebase Crashlytics to track and fix bugs, reducing overall defects by 30%.
 - Enhanced knowledge in iOS development, focusing on areas like Runtime, RunLoop, memory and multithread management, modern iOS architecture, networking, and algorithms.
 - Hands-on experience with iOS App management and test/release procedure in App Store Connect
 - Cooperated with cross-functional teams. Communicated efficiently with the PD, UX/UI, and back-end team
- iOS Engineer Intern, Dedao**, Beijing, China **10/19 - 01/20**
- Developed new UI modules by Swift for Dedao App including popup window and action sheet
 - Developed Sketch plugin which can generate Swift/OC code from Sketch layout and style information
 - Developed AI recognition functionality for the Sketch plugin by using macOS CoreML
 - Cooperated with team to refactor Dedao App with Swift. Refactored My Favorite module by using ReactKit and IGListKit

- Learned popular Swift libraries such as Kingfisher, Moya, RxSwift. Gained knowledge in MVVM design concept
- Learned algorithm in Dedao weekly algorithm challenge. Solved and Shared three hard level problems in LeetCode

Graduate Research Assistant, Purdue University, West Lafayette, IN, USA

08/18 – 05/19

- Developed an iOS App for SwiftComp™ by coding with Swift using Xcode. SwiftComp™ is a code developed by Prof. Yu's group at Purdue University for multiscale constitutive modeling for composites
- Designed and developed backend server for SwiftComp for communication with iOS App in JSON
- Developed an ANSYS Workbench platform-based GUI for SwiftComp™ using ANSYS ACT
- Developed an ANSYS Classical platform-based GUI for SwiftComp™ using ANSYS ACT
- Conducted multiscale structural analysis for honeycomb sandwich structure using ANSYS and SwiftComp™. Derived formulas to characterize the bending stiffness of honeycomb sandwich structure

Product Design FEA Intern, Apple Inc, Cupertino, CA, USA

01/18 – 08/18

- Developed FEA models on module and system levels to compare design configs, predict potential failure, and find root causes of design failure. Familiar with reliability tests
- Designed and conducted 3pt bending test experiments to characterize the stiffness and strength of materials for validating FEA and material models. Familiar with material calibration
- Developed Matlab scripts for design optimization, data analysis, and job automation
- Cooperated with cross-functional teams. Extensive practice on communication and presentation skills
- Hands-on experience with Abaqus CAE, Hypermesh, and SimLab. Familiar with static, quasi-static, dynamic, explicit dynamic and modal analysis. Proficient with Abaqus keywords

MAPDL Testing Engineer Intern, ANSYS Inc, Canonsburg, PA, USA

05/16 – 08/16

- Planned and designed different test models and APDL test scripts for the new features of ANSYS Mechanical APDL using engineering judgment and submitted 50+ test cases into the test set for daily regression testing
- Worked closely with R&D teams by verifying newly developed features, identifying root cause of bug and communicating effectively within and across teams
- Learned knowledge about ANSYS ACT, Python, and XML by taking ANSYS training course
- Gained expertise in FEA, ANSYS Workbench, Nonlinear numerical simulation and meshing technology

SKILLS

- Programming: Objective-C, Swift, Java, Python, Dart, JavaScript, C, MATLAB, Kotlin, Fortran, HTML/CSS
 - Tools: Xcode, Android Studio, Git, Node.js, jQuery, Linux, Vim, Sketch, Abaqus, ANSYS, Hypermesh
 - Languages: Native speaker of Chinese, professional working proficiency in English (IELTS Band 7.5)
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