

# Saagar Jha

📧 @saagarjha

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## Skills

### Languages

Fluent in C, Swift, Objective-C, Java

Proficient in C++, Bash, Lua, Scala, Python, Rust, JavaScript, assembly for various architectures

### Tools and Practices

Experienced with application and binary security, reverse engineering, Cocoa Touch, debugging, Xcode, Git

Familiar with POSIX systems, runtime system design, Darwin, Cocoa, automated testing, LLVM, instrumentation and profiling, UI/UX design, continuous integration, Apache Hadoop, the network stack

## Education

University of California, Santa Barbara

Santa Barbara, CA

Bachelor of Science Computing, College of Creative Studies

Expected Graduation: June 2020

*Regents Scholar, College of Engineering and College of Creative Studies Honors*

## Personal Projects

REGULAR VM (C++, Rust)

GitHub

Virtual machine for an accelerated course that I helped design and teach aimed at preparing first-year undergraduate students to take graduate-level classes. Reference implementation written in C++17; verification done in Rust.

break (Swift)

App Store, GitHub

Third-party application for accessing grades, assignments, and other school-related materials from School Loop using a reverse-engineered HTTP REST/WebDAV interface. Features significant use of iOS technologies, including 3D Touch, Touch ID/Face ID, Watch Connectivity, Grand Central Dispatch, the Keychain, and custom UIKit controls.

elevate (C++)

GitHub

Small but generic header-only C++11 library that provides useful extensions to the C++ Standard Library, with templated implementations of common constructs such as comparison operators, primality and parity checking, pretty printing, additional functional algorithms, and polyfills for newer API such as ranges and type traits.

## Experience

Safari Intern, Apple

Jun 2019 – July 2019

Darwin Platform Experience Consultant, SaurikIT

Oct 2018 – Dec 2018

Provided architectural and design guidance for Orchid's development efforts on iOS, watchOS, and macOS.

HomeKit QA Tooling Intern, Apple

Jun 2018 – Sep 2018

iOS Contractor, Danal

Aug 2017 – Sep 2017

Created a low-level networking library and helped integrate it into our clients' apps.

Intern, Unravel

Jun 2016 – Aug 2016

Wrote a MapReduce tool to locate and extract log files from the Hadoop Distributed File System for further analysis.

## Selected Awards

Contributions to numerous strong Capture the Flag performances as a Shellphish team member, 2017-  
WWDC Scholarship Recipient, 2017

USA Computing Olympiad Gold Division, 2016

American Invitational Mathematics Examination Qualifier, 2014-2016 (Top 2.5% in US)

USA Physics Olympiad Silver Medal, 2017 (Top 100 in US); Honorable Mention, 2016 (Top 250 in US)

Physics Bowl Division 2 Regional Top Scorer, 2016 (Top scorer in northern California)