

# Jake Palanca • Software Engineer

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## SUMMARY OF QUALIFICATIONS

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Networking-focused **Java** (Spring Boot) and **React** developer. Built secure, encrypted auth/reset flows and real-time stream/packet analyzers (browser-level HLS/DASH detection; tcpdump/traceroute parser handling multi-GB logs in O(1) memory).

## EDUCATION

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**University of Georgia**

*Bachelor of Science, Computer Science*

Graduation May 2026

3.66 GPA

## RELEVANT COURSEWORK

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Software Engineering | Web Programming | Computer Networks | Algorithms | Data Structures  
| Theory of Computing | Linear Algebra | Software Development | Systems Programming

## TECHNICAL SKILLS

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**Languages:** Java, JavaScript, Swift, Python, C

**Frameworks:** Spring Boot, React, SwiftUI

**Tools/Cloud:** Git, AWS, Google Cast SDK, Jasypt

**Testing:** JUnit, XCTest

## SOFT SKILLS

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Problem-Solving | Team Collaboration | Critical Thinking | Time Management

## RELEVANT PROJECT EXPERIENCE

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### Swiftcast Casting Browser, *Personal Project (Ongoing)*

- Injected a JavaScript content script at page load in the app's WebView to observe in-page network activity and capture outgoing video stream requests in real time.
- Shimmed HTML5 media/MSE APIs to surface dynamic HLS/DASH manifest URLs and blob: sources generated via Media Source Extensions.
- Parsed request URLs/headers/payloads client-side and relayed playable streams to Chromecast using the Google Cast SDK.

### Cinema Booking Website, *Class Project*

- Built end-to-end login/forgot/reset flows wired to Spring Boot endpoints, coordinating UI state with React Router.
- Encrypted sensitive payment fields at rest using a custom JPA IntegerCryptoConverter (Jasypt) applied via @Convert on CVV/ZIP columns.
- Implemented a token-validated password reset that POSTs to /reset-password and routes users back to the login screen on success.

### TCPdump Parser, *Class Project*

- Reconstructed hop-by-hop paths by matching outbound TCP (id/TTL) to ICMP "time exceeded"/"destination unreachable" replies.
- Streamed multi-GB traces with a buffered generator pattern to keep memory O(1).
- Computed RTTs from tcpdump timestamps, aggregated per-TTL, and supported both Unix traceroute+tcpdump and Windows tracert logs.

## WORK EXPERIENCE

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**Five Guys**, Shift Leader

**Bruster's Ice Cream**, Shift Leader

January 2021 - November 2021

April 2022 - August 2022