


ARIEL TYSON

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EDUCATION

Simon Fraser University, Burnaby, BC

Expected Graduation Date: Dec 2026

Bachelor of Science (BS / BSc), Computer Science

- **Coursework:** Artificial Intelligence, Machine Learning, System Design, Data Structures & Algorithms, Databases, Computer Vision
- **Extracurriculars:** Captain of SFU Intramural Soccer Team, Students of Caribbean & African Ancestry (SOCA), ColorStack Chapter Founder

EXPERIENCE

Software Engineer Intern - Twitch (Amazon)

May 2025 – Present

- Architected authentication mechanisms using **Swift**, enabling anonymous session management and **adding 70 million daily minutes watched** to the Twitch iOS app
- Engineered **networking** logic in **SwiftUI** and **UIKit**, handling edge cases related to logged-out users, enhancing video stream accessibility
- Implemented dynamic discovery feeds powered by conditional data-fetching from **GraphQL** endpoints, resulting in a **30% improvement in content engagement metrics**
- Customized interactive UI elements for anonymous interactions, such as read-only chat views, significantly reducing onboarding friction and **boosting app retention rates by 20%**
- Resolved navigation syncing through login flows following **The Composable Architecture (TCA)** for state management optimization

Software Engineer Intern - Workday

May 2024 – Dec 2024

- Delivered functionalities in **Objective-C & Swift** to augment **developer productivity tools & frameworks** for the **Workday iOS** application
- Architected **API designs** to allow access to protected APIs via **tokenized authentication** for **improved client-server protocol security**
- **Refactored** Swift classes to adhere to **SOLID** principles & **object-oriented** design to support **dependency injection & factory pattern**
- Leveraged **XCTest** to **create unit tests in XCode** following **Test-Driven Development** to address resiliency issues in **macOS and iPadOS**
- Enhanced app usability through Apple's accessibility inspector & **UIKit Accessibility API** to ensure compliance with **WCAG** standards.
- Drove the implementation of **Signposts & Combine** to track navigation within the iOS app & **increase observability of events by 75%**
- Partnered with designers to establish a **Loading Dots UIComponent** using **SwiftUI** which is incorporated within 100% of loading views
- Pioneered the investigation of automated **Push Notifications** on iOS to align Workday's accordance with Apple Push Notification Service
- Prototyped the usage of Apple's **TipKit Framework** within the Workday iOS app for **enhanced feature discovery** and customer support

Teaching Assistant - Microsoft TEALS

Jan 2024 – Aug 2024

- Conducted classes overseeing a **full cycle education of Python** from syntax, to debugging, to functional application building and **object-oriented design skills** with personalised teaching and consistent feedback
- Built a platform for 9th grade students of BC to enhance **analytical, debugging, critical thinking, and problem-solving skills** and **work effectively, both in teams & independently**, through structured tasks

Software Developer Intern - RAD Torque Systems

Sep 2023 – Apr 2024

- Developed a **search feature** with **C# & .NET MAUI** which consumed a **RESTful API** to allow multi-platform, real-time information access
- Automated process workflows by **building a CI/CD pipeline with Jenkins**, reducing deployment cycles **from 2 hours to 10 minutes**
- Hosted a **web server** built using **Python Flask module** in Docker to listen to post requests from Microsoft teams and trigger consequent stages of a custom designed **DevOps flow**

PROJECTS

Focus AR | GitHub | **2025 Apple Swift Student Challenge Winner** | ARKit / Vision / CoreML / RealityKit

Jan 2025 – Present

- Crafted **immersive AR** experiences using **ARKit** and **RealityKit** to render interactive 3D objects anchored in real-world environments
- Harnessed **CoreML** and **Vision** to implement on-device clutter detection via a **custom neural network**, providing real-time feedback

Tourism Beats | AppStore | **Swift / XCode / SwiftUI / iOS**

June 2024 – Present

- Visualized landmarks using dynamic UI animations powered by **SwiftUI** and **SceneKit**, creating immersive interactions tailored to tourism
- Integrated **MusicKit** API to display songs, **WeatherKit** for accurate environmental details, & **MapKit** for intuitive mapping interfaces

TECHNICAL SKILLS

Programming Languages: Swift, C#, Python, Java, C, C++, JavaScript, SQL, Objective-C, Golang

Technologies: Git, Bash, PowerShell, HTML, CSS, React.js, React Native, SQLite, ASP.NET Core, Azure, AWS, GCP, Docker, Jenkins, GraphQL

Transferable Skills: Time Management, Verbal & Written Communication, Multi-Discipline Team Collaboration, Product Reviews, UI/UX Design