


ARIEL TYSON

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EDUCATION

Simon Fraser University, Burnaby, BC

Expected Graduation Date: Dec 2026

Bachelor of Science (BS / BSc), Computer Science

- **Courses:** Machine Learning, Computer Vision, Artificial Intelligence, System Design, Data Structures & Algorithms, Databases, Research
- **Leadership & Extracurriculars:** ColorStack SFU Chapter Founder & President, Community Advisor, Peer Tutor, Hackathon Judge

EXPERIENCE

Amazon (Twitch) - Software Engineer Intern

May 2025 – Aug 2025

- Enabled anonymous session state management and authentication **adding 250+ million daily minutes watched** to the Twitch iOS app
- Leveraged Swift Concurrency with async/await patterns to efficiently handle asynchronous network requests from a GraphQL backend
- Engineered networking logic in **SwiftUI** and **UIKit**, handling edge cases related to logged-out users & enhancing video stream accessibility
- Implemented discovery feeds powered by Artificial Intelligence Personas, driving a **30% improvement in content engagement metrics**
- Customized interactive UI elements for anonymous interactions, reducing onboarding friction and **boosting user retention rates by 20%**
- Resolved navigation syncing through login flows following The Composable Architecture (TCA) for state management optimization
- Utilized XCTest for unit tests & Swift Testing for UI tests achieving **100% test coverage** of the critical follow action in guest mode
- Ported Android **Kotlin** implementations to iOS features & updated **Golang(Go)** GraphQL schemas to **improve recommendations by 10%**
- Built a reusable Authentication Required Animation using the Lottie framework to seamlessly prompt users for Login in Guest Mode

Workday - Mobile Engineering Intern (iOS)

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 MVVM, SOLID principles & object-oriented design to support dependency injection & factory pattern
- Optimized 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

Microsoft TEALS - Teaching Assistant

Jan 2024 – Aug 2024

- Conducted **Python** tutorials from debugging to functional application building using object-oriented design with a **95% pass rate**
- Built a platform to enhance analytical, critical thinking, and problem-solving skills and work effectively, both in teams & independently

RAD Torque Systems - Software Developer Intern

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 using Flask & Docker to listen to post requests and trigger consequent stages of a custom designed DevOps flow

PROJECTS

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

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
- Applied **Natural Language Processing** for Siri voice commands & on-device intelligence through App Intents & Foundation Models API

Tourism Beats | AppStore | **UpTech.ai Startup Founder** | MusicKit / MapKit / WeatherKit

June 2024 – Present

- Founded a Machine Learning startup geared towards AI tourism with a flagship product **exceeding 100+ App Store downloads**
- Illustrated landmarks using dynamic UI animations powered by SwiftUI and SceneKit to complement real-time safety and visa data
- Integrated MusicKit API to display songs, WeatherKit for accurate environmental details, & MapKit for intuitive location interfaces

TECHNICAL SKILLS

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

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