

Brighton G. Young

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Education

Virginia Polytechnic Institute and State University, Blacksburg, VA

BS in Computer Science, Minor in Human-Computer Interaction

Graduation Fall 2025

Coursework: Data Structures & Algorithms, Software Design, HCI, iOS Mobile Development, GUI & 2D Graphics, Algorithm Analysis

Skills

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

Frameworks & Libraries: Java Collections, JUnit, React, Next.js, Node.js, Tailwind CSS, React Query

Tools: Git/GitHub, Linux Shell, VS Code, Xcode, Eclipse, MATLAB

Concepts: Data Structures & Algorithms, Object-Oriented Design, Architecture & Design Patterns, Debugging & Testing (Unit, Mutation, Coverage), SQL & NoSQL, REST APIs & Full-Stack, GUI Design, UI/UX & Accessibility

Projects

Real-Time City Explorer Web App

Next.js, React, TypeScript, Tailwind, React Query, Node.js, Mongoose

- Built a single-page web app to "teleport" to any city: geocoded autocomplete search → live weather, fresh photos, recent news, search history, radio streaming, and live city webcams.
- Implemented backend API routes (geocoding, weather, photos, news, radio, livestream) with independent cards.

iOS Fitness & Nutrition Tracker

Swift, Xcode

- Full-stack iOS app with barcode scanning, manual entry, calorie/macros analysis, goal tracking, BMI, and PDF export for progress sharing.
- Designed a clean, accessible UI and robust input/edge-case handling to reduce user friction and bad data.

Memory-Managed Scheduling System

Java

- Built a scheduler with custom doubly-linked list + hash table (quadratic probing) for near $O(1)$ average lookups.
- Implemented a first-fit allocator with coalescing/resizing to reduce fragmentation; achieved 90%+ mutation test coverage for reliability.

Systems Debugging Challenge

C, GDB, x86

- Reverse-engineered an obfuscated binary: mapped control flow, set breakpoints, inspected memory/stack to neutralize all six phases.
- Demonstrated assembly-level fault isolation and defensive debugging, earning a perfect score.

Experience

Virginia Tech, Blacksburg, VA

Resident Advisor

2022 — 2025

- Mentored 150+ students annually; applied conflict-resolution strategies and well-being practices similar to collaborative team problem-solving.
- Designed engagement initiatives informed by participation data, demonstrating analytical and user-focused design skills.

Blacksburg Fire Department, Blacksburg, VA

Firefighter

2023 — 2025

- Certified Firefighter I & II, HazMat Ops; operated in cross-functional teams where coordination and communication were critical to success.
- Trained in rapid decision-making under pressure; parallel to debugging and incident response in high-stakes environments.

Willing to relocate.