

# 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, ChatGPT and AI tools

**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

### Live 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 with geocoded autocomplete search, showing live weather, fresh photos, local news, radio streaming, webcams, and search history.
- Aggregated data from multiple APIs (geocoding, weather, photos, news, radio, livestream) and delivered results through a responsive cards-based UI.

### iOS Fitness & Nutrition Tracker

*Swift, Swift UI, Xcode*

- Developed a full-stack iOS app with barcode/API food logging, manual entry, calorie/macros analysis, PDF exports, goal tracking, database CRUD, YouTube integration, and deployability across iPhone/iPad.
- Designed a clean, intuitive, and accessible UI/UX.

### Vision-Based Wildlife & Hazard Monitor

*Python, PyTorch, OpenCV, GIS, Leaflet*

- Engineered a multi-modal AI monitoring system (vision, sound, motion) to flag wildlife, people, and hazards using camera, sound, motion and vibration data.
- Delivered a dashboard for supervisors with maps views, tracking, media clips, and predictive alerts.
- Coordinated with SAIC stakeholders to tune detection thresholds and align dashboard UX to optimize field decision-making.

### Vessel Behavior Detector

*Python, Pandas*

- Built an ML pipeline to process raw AIS data and detect suspicious vessel behaviors (dark activity, loitering, rendezvous, abnormal path deviations) using trajectory and zone-based features with rule/context filters.
- Generated interpretable flags for analysts while managing noisy/incomplete data through systemic cleaning and validation.

### AI Movie Helper App

*Next.js, React, TypeScript, OpenAI LLM*

- Created an AI-powered app that delivers tailored reviews, recommends seats and rooms, generates seat-view images, finds best-value tickets, and syncs group calendars.

## Experience

### Virginia Tech, Blacksburg, VA

*Resident Advisor*

2022 — 2025

- Managed 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.