

# 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:** Machine Learning, Generative AI, Data Structures & Algorithms, Software Design, HCI, iOS and Web Development

## Skills

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

**Frameworks & Libraries:** React, Next.js, Node.js, PyTorch, OpenCV, Tailwind CSS, React Query, JUnit, Mongoose

**Tools:** Git/GitHub, Linux Shell, VS Code, Xcode, Eclipse, MATLAB, ChatGPT and AI tools, FFmpeg, Git/GitHub/GitLab, ChatGPT API

**Concepts:** ML pipelines, Computer Vision, Generative AI, Recommender Systems, REST APIs and Full-Stack, Data Visualization and Dashboards, Personalization and Preference Modeling, Time-Series and Anomaly Detection, Testing, Design Patterns, Data Cleaning and Validation, Web Scraping and Data Aggregation, UI/UX and Accessibility

## Projects

### Vision-Based Wildlife & Hazard Monitor

*Shell, Python, PyTorch, OpenCV, React, Leaflet, FFmpeg*

- Engineered a multi-modal ML monitoring system that detects wildlife, people, and hazards from camera and sensors.
- Produced an interactive dashboard for supervisors with live map views, clips, and alerts.
- Coordinated with SAIC stakeholders to tune detection thresholds and align UX to optimize in-field decision-making.

### Vessel Behavior Detector

*Python, Pandas*

- Developed an ML pipeline to detect suspicious/illegal vessel behavior from large, noisy AIS datasets using trajectory and zone features with rule/context filters.
- Trained a model for anomaly scoring and generated interpretable flags for analysts.

### AI Movie Helper App

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

- Aggregated and summarized personalized reviews with ChatGPT API and a recommendation system driven by user preferences and behavior.
- Integrated scraped and API-sourced data, real-time showtimes, ticket purchasing, and generative AI seat-view images.

### 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.

## Experience

### Virginia Tech, Blacksburg, VA

*Resident Advisor*

2022 — 2025

- Managed scheduling, reporting, and crisis response for 150+ residents; handled medical, safety, and conflict emergencies.
- Led high-attendance programs and mentored new RAs through onboarding and training.

### Blacksburg Fire Department, Blacksburg, VA

*Firefighter*

2023 — 2025

- Certified Firefighter I & II, HazMat Ops; performed fire suppression, rescue, extrication, and HazMat operations; collaborated with EMS and police during emergencies.
- Led engine crew on 3–4 weekly overnight/weekend shifts while balancing full-time academics.

Willing to relocate.