

# Alexis Hirsch

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## Summary

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Computer Science student at Virginia Tech with experience in full-stack development and legacy systems. Skilled in building responsive user interfaces and data-driven applications. TS/SCI cleared. Interested in frontend development and visualization tools. Graduating May 2026.

## Technical Skills

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**Frontend (Primary):** React, React Native, HTML/CSS, Figma, Accessibility, Responsive Design

**Languages:** JavaScript, TypeScript, Python, Java, SQL (MySQL), Bash, XML

**Backend & Tools:** Git, GitHub, Bitbucket, Docker, Jira, Confluence

**Concepts:** Data Structures, Algorithms, Agile, Version Control, Image Processing

**Other:** Human-Computer Interaction, User-Centered Design, Conversational Spanish

## Experience

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### Virginia Tech National Security Institute RTX Fellowship Program

Fellow

Aug 2025 – Present

- Developing simulated environments to model radio frequency (RF) propagation in open field, obstructed, and complex multipath scenarios.
- Prototyping a multiplayer communication game to evaluate radios/antennas and waveform reliability.
- Implementing waveform visualization (including 5G) to demonstrate mission success versus adversarial RF detection.

### Raytheon (RTX)

Software Engineering Intern

May 2024 – Present

- Designed and implemented command-line and GUI software tools supporting Navy Triton test environments.
- Debugged failures in mission-critical defense systems, improving reliability.
- Authored technical documentation and presented to partners including Northrop Grumman.
- Contributed to Agile sprint planning and retrospectives.

### Virginia Tech National Security Institute RTX Fellowship Program

Fellow

Sept 2024 – May 2025

- Cleaned and parsed 70k+ emails generated by a VT-built system with realistic fake users.
- Developed Python methods to analyze emails for misuse, demographic targeting, and potential abuse.
- Explored vulnerabilities in subscription-based email data and presented findings.

### Virginia Tech National Security Institute RTX Fellowship Program

Fellow

Oct 2023 – May 2024

- Completed hands-on labs in secure protocols, threat modeling, and network analysis.
- Practiced applied cybersecurity in simulated and real-world environments.

### Autonomous Aerial Vehicles at Virginia Tech

Programming Team Member

Sept 2023 – May 2024

- Developed Python computer vision algorithms for shape and color detection.
- Integrated detection methods into drone navigation challenges.

## Projects

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**SamePath:** Mobile class matching app database built in Python and Azure. Frontend written in typescript, compiled in React Native + Expo Go. Designed CRN-based filtering logic to connect students in shared classes.

**Hirsch Leasing Website:** Developed a responsive property listing site with HTML/CSS and custom branding for polished UI/UX. Deployed with Render.

**Sorting Interactive UI:** Created an interactive Java UI demonstrating insertion sort on linked lists using OOP principles and deep cloning.

**Tower of Hanoi GUI:** Built a Java GUI to animate Tower of Hanoi puzzle movements, showcasing problem-solving and interface design.

## Education

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### Virginia Tech

*B.S. Computer Science*

Minor: Human-Computer Interaction

GPA: 3.5

*Expected May 2026*