

# Eli Boyden

540-233-2120 | eliboyden2027@outlook.com | [LINKEDIN](#) | [GITHUB](#)

## EDUCATION

<b>University of Virginia, School of Engineering and Applied Science</b> <i>B.S. Computer Science B.A. Mathematics, Statistics Concentration Data Science Minor</i>	August 2023 – May 2027
• Cumulative GPA: 3.947/4.00	

## EXPERIENCE

<b>Software Engineer Intern</b> <i>City of Charlottesville Department of IT</i>	August 2025 – December 2025 Charlottesville, VA
• Planning and developing a <b>real-time event monitoring system</b> to collect, process, analyze and distribute API and RSS feed data on critical events in Charlottesville using React and specialized <b>Python cron jobs</b> .	
• Building out preferences and alert pushing with Microsoft Teams for 20+ departments.	
• Integrating <b>PostgreSQL</b> cloud database with Supabase, creating a <b>RESTful API</b> for storage and manipulation of alert updates and user account authentication data.	
<b>Full Stack Software Engineer Intern</b> <i>YSTEM and Chess</i>	May 2025 – August 2025 Remote
• Wrote and maintained automated <b>unit and integration tests</b> using Jest, reducing React front-end production bugs and increasing development team test coverage by over 60%.	
• Lead accessibility improvements across React components, increasing compliance with <b>WCAG standards</b> , and improving usability for screen readers, keyboard navigation, and users with visual impairments.	
<b>Application Software Developer</b> <i>Mathesis Technology</i>	May 2025 Hybrid Charlottesville, VA
• Designing and launching secure departmental course sites using <b>JavaScript, HTML, CSS</b> and improving access and reducing manual workload for faculty.	
• Adapting, deploying and maintaining static site generator serving 150+ students per semester.	
• Integrating <b>Cloudflare authentication</b> into custom-built educational platforms, enabling secure student logins while reducing security errors and unauthorized access.	

## PROJECTS

<b>TAGuide</b>   <i>PostgreSQL, Python, Encryption (bcrypt, Fernet), Flask, React</i>	
• Full-Stack encrypted <b>React</b> application for running Selenium web scraping jobs to <b>automate data collection</b> from Gradescope, enabling tracking and visualization of Teaching Assistant (TA) grading progress.	
• Helped identify and subsequently correct grading work imbalances of up to 25%.	
<b>Game Theory and AI Framework</b>   <i>Java, JUnit, Git, Gradle</i>	
• Provides plug-and-play interface for search algorithms, enabling users to create bots for custom two player games.	
• Includes algorithms (Minimax, Alpha-Beta, Negamax etc.) and playable implementation of Ultimate Tic-Tac-Toe.	
<b>Transformer Neural Network</b>   <i>Java, JUnit, Git</i>	
• Achieved 97% accuracy on MNIST <b>handwritten digit dataset classification</b> and 91% on <b>heart attack prediction</b> by optimizing matrix operations and refining model architecture.	
• Validated and tested implementations with custom unit tests using <b>JUnit</b> , ensuring model stability and correctness through structured experimentation.	

## SKILLS

<b>Databases:</b> PostgreSQL, MongoDB, SQLite, Supabase
<b>Programming Languages:</b> Python, Java, JavaScript, TypeScript, C, SQL, HTML, CSS, SCSS (Sass)
<b>Frameworks &amp; Libraries:</b> React.js, Node.js, Express.js, Flask, Jest, JUnit, JPA, Selenium, Gradle, Django
<b>Tools &amp; Platforms:</b> Git, GitHub, Render, Cloudflare Pages, Figma, Obsidian, Quartz, Make
<b>Concepts &amp; Methodologies:</b> Object-Oriented Programming (OOP), Agile Development, Scrum, Unit Testing, Accessibility Compliance, RESTful APIs, CI/CD Basics, Machine Learning (Neural Networks)

## CERTIFICATIONS

<b>AWS:</b> Certified Cloud Practitioner CLF-C02   <a href="#">Certification</a>
<b>Scrimba:</b> Advanced React   <a href="#">Certification</a>