

# Samuel Leong

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## EXPERIENCE

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### • Disinfo Lab

September 2024 - present

Software Engineer

Williamsburg, VA

- Built automated data pipeline integrating Selenium and BeautifulSoup for web scraping with FinBERT transformer model to perform sentiment analysis.
- Co-authored [article](#) on gender-based violence in India, published in Diplomatic Courier.
- Contributed to frontend, backend, and data collection development across multiple project teams.

### • iDTech

June 2025 - August 2025

Instructor

Charlottesville, VA

- Taught object-oriented principles and scripting fundamentals programming concepts in Java and Lua.

## EDUCATION

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### • William and Mary

2023 - present

Williamsburg, VA

Major GPA: 3.94

- Pursuing Bachelor of Science in Computer Science with a minor in Data Science.
- Relevant Coursework: Software Development, Systems Programming, Applied Cybersecurity, Computer Organization, Algorithms, Principles of Programming, Data Structures, Discrete Structures.

### • The Web Development Boot Camp

June 2025

Remote

[Certificate](#)

- Gained hands-on experience with HTML5, CSS3, JavaScript, Node.js, Express.js, MongoDB, and React through 70+ hour project-based curriculum.

## PROJECTS

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### • Wok

August 2025

A high-performance 2100-rated chess engine coded in C++

[Live](#)

- Developed support for both native and WebAssembly builds using Emscripten, enabling cross-platform deployment in browsers and desktop environments.
- Implemented a Minimax Search Algorithm with alpha-beta pruning, reducing evaluated positions by 35%.
- Utilized Zobrist hashing to cache search states, improving move ordering and enabling transposition tables for an 83% deeper search.

### • Historical Spots

July 2025

A Full-Stack Historical Site Review Web Application

[Live](#)

- Developed RESTful API using Node.js and Express.js to handle server-side routing and request processing.
- Implemented secure authentication using Passport.js with OAuth integration and Helmet.js middleware to protect against common web vulnerabilities.
- Designed responsive front-end using HTML5, CSS3, JavaScript/jQuery, and EJS templating engine for dynamic server-side rendering.
- Architected MongoDB database to manage historical sites, user data, reviews, and ratings.

### • Fact Forecast

November 2025

A Full-stack fact-checked information platform leveraging ELK stack and interactive mapping

[Live](#)

- Engineered interactive mapping interface with OpenLayers for visualizing country-specific GeoJSON datasets and optimized rendering performance, reducing memory consumption by 57%.
- Developed Flask backend API with Elasticsearch integration, implementing vector search for semantic queries and high-performance data retrieval.
- Configured ELK stack with Logstash data pipelines and Kibana dashboards for real-time analytics and visualization of streaming data.

## SKILLS

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- **Languages:** Python, Java, HTML, CSS, JavaScript, C, C++
- **Software/Frameworks:** Git, Node.js, Express.js, Flask, Elasticsearch, Logstash, Kibana, Bootstrap, Linux, Eclipse, LaTeX, JUnit, Pytest, OpenLayers, MongoDB
- **Awards:** Top Five NCL Fall 2025 Team Game Graduate Bracket, TribeHacks 2024 Best Map & Data Hack