

Samuel Leong

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EXPERIENCE

- **Disinfo Lab** September 2024 - present
Williamsburg, VA
Software Engineer
 - 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
Charlottesville, VA
Instructor
 - Taught object-oriented principles and scripting fundamentals programming concepts in Java and Lua.

EDUCATION

- **William and Mary** 2023 - present
Major GPA: 3.94
Williamsburg, VA
 - 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
Certificate
Remote
 - Gained hands-on experience with HTML5, CSS3, JavaScript, Node.js, Express.js, MongoDB, and React through 70+ hour project-based curriculum.

PROJECTS

- **Wok** August 2025
Live
A high-performance 2100-rated chess engine coded in C++
 - 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
Live
A Full-Stack Historical Site Review Web Application
 - 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
Live
A Full-stack fact-checked information platform leveraging ELK stack and interactive mapping
 - 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

- **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