

# SARAH A. YU

## SOFTWARE ENGINEER

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### EDUCATION

#### Carnegie Mellon University

Pittsburgh, PA

B.A. Biological Sciences

- Relevant Coursework: Principles of Computing, Fundamentals of Programming

### EXPERIENCE

#### Software Engineer (Contract)

04/2024 – 08/2024

Eastern Virginia Medical School

Norfolk, Virginia (Remote)

- Developed websites using JavaScript, PHP, HTML, and CSS for a major rebranding and merger initiative, managing 250,000+ monthly page views across [evms.edu](https://evms.edu), [evmsmedicalgroup.com](https://evmsmedicalgroup.com), and [evmsfoundation.org](https://evmsfoundation.org).
- Designed responsive website prototypes in Figma, translating client requirements into intuitive user interfaces and ensuring consistent branding across all websites.
- Deployed advanced security frameworks leveraging encryption and multi-factor authentication to safeguard sensitive medical data, maintaining full HIPAA compliance.
- Applied cross-platform compatibility and accessibility standards (WCAG 2.1) to all web properties, enhancing user experience and meeting federal guidelines.

#### Software Engineer Intern

06/2024 – 08/2024

Massachusetts State Lottery

Boston, MA (Hybrid)

- Developed Optical Character Recognition (OCR) software using Python, PyTesseract, and Selenium to scan and read lottery tickets, extracting serial numbers and validating ticket information against an internal SQL database.
- Automated the input of ticket information into an Excel document using Python, eliminating manual data entry.
- Performed unit, integration, and end-to-end testing to improve code quality and minimize post-deployment bugs.
- Implemented a CI/CD pipeline in GitHub Actions to automate testing and deployment, decreasing manual testing time by 50% and enabling faster release cycles.

#### Software Engineer

08/2023 – Present

Resilient Coders

Boston, MA (Remote)

- Engineered and deployed scalable full-stack web applications using React and Node (MERN stack), integrating API endpoints, user authentication, and real-time data processing.
- Constructed and optimized MongoDB and SQL databases, reducing query response times by 25%.
- Trained and deployed an AI chatbot, generating significant cost savings by optimizing employee onboarding and support.

#### Software Engineer (Freelance)

08/2022 – 03/2024

Several Clients

New York, NY (Remote)

- Designed and developed a web application to analyze users' DNA for genetic predisposition to Alzheimer's disease.
- Built a responsive website for a tutoring company, implementing a custom scheduling platform, resulting in a 31% increase in company revenue within the first year.
- Spearheaded SEO strategies, optimizing metadata, leveraging backlinks, and improving site speed, increasing organic search visibility and user engagement by 33%.

### SKILLS

- Programming Languages:** JavaScript, Python, PHP, SQL
- Front-End Development:** React, HTML, CSS, jQuery, Bootstrap, Tailwind
- Back-End Development:** Node.js, Express.js, EJS, REST APIs
- Databases:** MongoDB, MySQL
- Data Visualization:** NumPy, Matplotlib
- Testing:** Jest, Vitest, Cypress, Selenium
- DevOps:** Docker, Git, GitHub, GitHub Actions
- Content Management Systems:** WordPress, Terminalfour, Drupal
- Optical Character Recognition:** PyTesseract, Pillow (PIL)
- Operating Systems:** Windows, WSL, Linux (Ubuntu), macOS
- Other:** Agile, Figma, UI/UX design, WCAG 2.1, SEO, Artificial Intelligence (AI) and Machine Learning (ML)