

# SARAH A. YU

## SOFTWARE ENGINEER

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### EDUCATION

#### Carnegie Mellon University

Pittsburgh, PA

B.A. Biological Sciences, Minor in Computer Science

- Developed a Python program to analyze the p53 tumor suppressor gene, leveraging NumPy for data processing and Matplotlib to visualize amino acid composition and genetic patterns.
- Designed and developed an application to process raw DNA files and assess genetic risk for Alzheimer's disease. Watch my project walkthrough [here](#).

### EXPERIENCE

#### Web Developer & Consultant

08/2022 – Present

Nutrition by Nada, Accel Learning, Townsend Tutors, among others

New York, NY (Remote)

- Built [nutritionbynada.com](https://nutritionbynada.com), integrating a blog and appointment system to streamline patient access to services.
- Developed [accellearning.com](https://accellearning.com), embedding video calling to enable remote tutoring, increasing revenue by 31%.
- Spearheaded SEO, optimizing metadata, backlinks, and site speed, increasing search visibility and engagement.
- Technologies used: HTML, CSS, JavaScript, EJS, PHP, Node.js, MongoDB, WordPress

#### Software Engineer

04/2024 – 08/2024

Eastern Virginia Medical School

Norfolk, VA (Remote)

- Developed websites using JavaScript, PHP, HTML, and CSS for a 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 website prototypes and pattern libraries in Figma, creating responsive and visually appealing UIs.
- Conducted visual QA with Cypress and Percy for design accuracy, cross-browser compatibility, and accessibility.
- Enhanced user engagement by refining navigation flows and A/B testing CTAs, improving conversion rates.
- Implemented encryption and multi-factor authentication to safeguard medical data, ensuring HIPAA compliance.

#### Software & Quality Assurance Intern

06/2024 – 08/2024

Massachusetts State Lottery

Boston, MA (Hybrid)

- Developed an Optical Character Recognition (OCR) program using Python, PyTesseract, and Selenium to scan and extract lottery ticket data, verifying serial numbers and other information against a MySQL 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 reduce post-deployment issues.

#### Software Engineer

08/2023 – 09/2024

Resilient Labs

Boston, MA (Remote)

- Engineered and deployed scalable full-stack applications using React, HTML, CSS, JavaScript, and Node.js, integrating API endpoints, user authentication, and real-time data processing.
- Constructed and optimized MongoDB and MySQL databases, decreasing query response times by 25%.
- Implemented a CI/CD pipeline in GitHub Actions, reducing manual testing by 50% and accelerating release cycles.

### SKILLS

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