# Jacob R. Stacy

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## Employment

**MSU RS&GIS –** East Lansing, MI **August 2022 - Present**
*Full Stack Web Developer*

- Redesigned user interfaces, implemented new functionalities, and deployed features seamlessly across various websites using Next.JS, Laravel, and Cascade CMS with vanilla JavaScript.
- Developed and integrated RESTful APIs to facilitate data exchange and enhance functionality across applications, ensuring robust and efficient backend support.
- Conducted weekly client and designer meetings to align technical requirements with aesthetic goals, fostering clear communication and consistent project success
- Designed and implemented reusable UI components, which were adopted across various company projects, significantly improving development speed, maintaining design consistency, and reducing duplicated efforts across teams.
- Comprehensively overhauled several client sites, collaborating effectively with clients while maintaining creative direction. The improved sites boast user-centric interfaces and modern aesthetics, positioning our client for increased patient acquisition.
- Overhauled key UI elements and data entry processes to create more intuitive workflows, resulting in a 20% reduction in user errors and a 15% increase in site engagement.
- Executed full-scale site revamps that increased patient acquisition by 10% for our clients, by optimizing sites for performance and modernizing interfaces to meet industry standards.

**MSU RS&GIS (Internship) –** East Lansing, MI **April 2022 - August 2022**
*Software Engineering Intern*

- Tasked with taking existing Arc GIS models and converting the models to python. Then streamlining the scripts to decrease processing times by 30% on large geographical data sets with more than 40,000 entries.
- Devised an innovative workaround for a critical memory leak in ArcGIS geo-processor, slashing individual processing time by 50% and eliminating script crashes, resulting in a multi-week reduction in total processing time.
- Streamlined and optimized scripts for handling large-scale geospatial data, contributing to a more efficient and scalable data processing pipeline.

## Skills

- **Languages:** HTML5, CSS, SASS, JavaScript, TypeScript, Python, C++, PHP, Java
- **Frameworks:** Next.js, React, Laravel, Flask
- **Backend Technologies:** SQL, PostgreSQL, SQLite**,** MongoDB, RESTful APIs
- **DevOps:** Docker, Kubernetes, AWS, S3, Google Cloud, GitHub, GitLab, Git
- **Project Management Methodologies:** Scrum, Agile

## Projects

- **Vessel Classifier for Protected Seas Marine Monitor:** Led the frontend and backend development for a team of five developers, creating a web application and YoloV8-based computer vision model. The project automated the creation of a comprehensive dataset, reducing creation time by 95%, facilitating applications in marine conservation, including the protection of coral reefs from illegal fishing. Demonstrated expertise in full-stack development and AI integration to solve real-world environmental issues. More Info Here
- **Top Dog:** Designed and developed a mobile-first full-stack social media web app using Next.js and MongoDB, enabling users to create and manage pet profiles, swipe through other profiles, and engage in a weekly leaderboard competition for top rankings. Integrated user authentication, image uploading, and a swipe-based user interface for an engaging and intuitive experience. This project highlights proficiency in responsive design, NoSQL databases, and creating scalable social platforms. Project Site Here
- **Python Database Management System:** Created a DBSM in Python that mimicked SQLite capable of handling multiple tables and databases, conflict resolution with parallel transactions, joins, and conditionals.

## Education

- **Michigan State University –** East Lansing, MI
  *Bachelor of Science in Computer Science*