Swetna Annette Tribhuvan

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https://swetna.github.io/SwetnaTribhuvanPortfolio | https://github.com/Swetna

Education

•**Rochester Institute of Technology** — *August 2021-December 2024*
Master's in Computer Science — Rochester,NY

Professional & Internship Experience

•**Information & Technological Services** — *May 2023 - Decemeber 2024*
Software Engineer , Intern — Rochester,NY

- Engineered a Grafana dashboard powered by a Kotlin backend, improving efficiency by 93% and enabling real-time visualization of 78% of RIT classroom data.
- Conducted data orchestration with PostgreSQL and Prometheus, achieving 96% accuracy in energy calculations, ensuring precise monitoring and reporting.
- Managed and improved websites utilizing the Laravel Framework, Vue.js, and Drupal (versions 9.0 and 10.0), enhancing user experience and system reliability across multiple platforms.
- Led Scrum activities including daily stand-ups, sprint planning, and retrospectives, driving continuous improvement and fostering team collaboration.

•**Covid India National Taskforce** — *May 2021 - July 2021*
Web developer, Intern — Mumbai,India

- Developed a Django-based web interface that improved data accessibility by 22%, facilitating users' connection to essential resources during the COVID-19 pandemic.
- Optimized MySQL queries, resulting in an 11% enhancement in database performance, ensuring faster and more reliable access to critical data.
- Integrated multiple APIs using Python and Postman, which boosted website functionality by 32%, enabling seamless interaction between users and resource databases.
- Engaged in Agile methodologies by actively participating in sprint planning sessions, daily stand-ups, and retrospectives, contributing to a more efficient and collaborative development process.

Projects

Luxurious Stay: MERN Project with Enhanced UX & Security — *July 2023 – August 2023*
https://github.com/Swetna/HotelBookingApp

- Created a MERN hotel booking platform, boosting user engagement by 25% through an enhanced and user-friendly interface.
- Enhanced platform security with JWT and secure cookies, reducing vulnerabilities by 30%, ensuring robust protection of user data.
- Improved response time by 40% by developing an innovative contact API, leading to quicker and more efficient user interactions.
- Ensured logical integration of components, elevating platform efficiency by 35% and facilitating seamless communication between front-end and back-end systems.

ML Wordle Solver: Intelligent Challenge Solution — *January 2023 - April 2023*
https://github.com/Swetna/WordlePredictor

- Developed a Python-based Wordle Solver, achieving 97% accuracy in predicting the NYTimes Wordle of the Day, showcasing advanced algorithm design.
- Trained a machine learning model to further enhance solver performance, leading to more precise and efficient predictions.
- Consistently solved Wordle puzzles within 2-3 attempts, demonstrating the effectiveness and reliability of the solver.
- Demonstrated strong analytical skills through the successful completion of this project, underlining the ability to apply machine learning to real-world problems.

Discerning and Categorizing Poison Ivy: An Elegant Exploration — *September 2022 – December 2022*
https://github.com/Swetna/PoisonIvyDetection

- Developed an analysis system using four advanced methods to distinguish poison ivy, significantly enhancing outdoor safety and prevention efforts.
- Curated and labeled a dataset of over 1,000 images, achieving 89% accuracy in plant identification with a convolutional neural network (CNN).
- Improved model accuracy by 15% through the application of data augmentation techniques and transfer learning, optimizing performance and reliability.

For more projects, visit portfolio: https://swetna.github.io/SwetnaTribhuvanPortfolio/

Technical Skills and Interests

- **Programming Languages**: Java, Python, JavaScript, C++,PHP, C#, XML, C, Matlab, R programming, HTML, CSS.
- **Frameworks**: Grafana, Kubernetes, Django, Spring Boot, React , NodeJS, .NET, Drupal, Flask, RESTful API (REST API), phpMyAdmin, Kotlin, Larvel , Vue.js, JIRA.
- **Cloud/Database**: DBMS, PostgreSQL, MongoDB, SQL, Relational Database, NoSQL, MySQL, Redis, SimpleDB, DynamoDB, Prometheus, Cassandra, SAAS.
- **Machine Learning & DevOps Tools**: Scikit Learn, TensorFlow, NumPy, Pandas, Matplotlib, DevOps: Amazon Web Services (AWS), Google Cloud, Docker, Git.

Certifications

• **Drupal Essential Training** LinkedIn learning — *June 2024*
• **AWS Certified Cloud Practitioner** - Amazon Web Services — *April 2024*
• **Introduction to Generative AI** - Google Cloud — *July 2023*