Swetna Annette Tribhuvan

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Master's in Computer Science
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Portfolio:- https://swetna.github.io/SwetnaTribhuvanPortfolio/
Google Developer Certificates

EDUCATION

•**Rochester Institute of Technology**	*2021-Current*
Master's in Computer Science	Rochester,NY
•**Don Bosco Institute of Technology**	*2017-2021*
Bachelor's in Information Technology	Mumbai,India

EXPERIENCE

•**Information & Technological Services- RIT**	*May 2023 - Current*
Software Engineering Intern	Rochester

- Engineered an illuminating Grafana dashboard to convey complex energy consumption and occupancy data within RIT classrooms effectively. Led data refinement, precise calculations, and comprehensive reporting, achieving a notable 93% improvement over the prior model.
- Conducted a seamless symphony of data orchestration, synergizing PostgreSQL and Prometheus to filter and summon information, along with integrating PHP and JavaScript into the front-end, aiding in the creation of interactive elements. This harmonious integration extended to Kubernetes and a user-friendly website, achieving an impressive 96% accuracy in energy calculation.

PERSONAL PROJECTS

Opulent Stay: MERN Project with Enhanced UX & Security *July 2023 – August 2023*

Built a luxurious MERN-based hotel booking platform, elevating user experiences and enhancing security.

- Spearheaded the opulent MERN hotel booking platform, integrated React.js for elegant interfaces, and achieved a 25% user engagement boost.
- Bolstered security via JWT and cookies,, resulting in 30% reduced vulnerabilities, while optimizing functionality with a robust contact API for 40% faster response times.

ML Wordle Solver: Intelligent Challenge Solution *January 2023 - April 2023*

A advanced solution to deduce & conquer the New York Times Wordle daily challenge with optimized efficiency.

- Synthesized a state-of-the-art Python-based Wordle Solver, deftly integrating a comprehensive dataset of 2,309 possible words to unravel the game's challenges.
- Trained a machine learning model on the dataset, enabling precise predictions based on the NY Times Wordle of the Day screen depiction.
- Exhibited remarkable accuracy, often solving Wordle puzzles in just 2–3 attempts, showcasing exceptional proficiency.

Discerning and Categorizing Poison Ivy: An Elegant Exploration" *September 2022 – December 2022*

A meticulously designed advanced visual analysis model,a refined solution to detect and classify poison ivy.

- Crafted an innovative machine learning masterpiece, employing advanced techniques to successfully discern poison ivy,contributing to safer outdoor experiences.
- Curated and labeled a dataset of over 1000 images, achieving 89% accuracy using a convolutional neural network.
- Data augmentation and transfer learning yielded an impressive 15% accuracy boost, enhancing model effectiveness.

Hydrological Insights: Forecasting Groundwater with Geo-Spatial Precision *September 2020 – March 2021*

Unveiling an exquisite Geo-Spatial Analysis system to mitigate water scarcity through groundwater prediction.

- Conducted geospatial analysis to detect and predict groundwater usage in a village using GIS software.
- Analyzed topographical, hydro-logical, and geological data to identify high-potential groundwater areas.
- Assessed land use and vegetation patterns through remote sensing data to understand their relationship with groundwater availability.
- Pioneered a prediction accuracy rate of approximately 92% and developed an Android application and website for streamlined accessibility and information dissemination.

TECHNICAL SKILLS AND INTERESTS

Languages: Java, Python, JavaScript,C#, C, Matlab, R programming, HTML, CSS, LISP
Frameworks: Grafana, Kubernetes, Django, Spring Boot, ReactJS, Node.js, Flask, Bootstrap, RESTful API (REST), phpMyAdmin
Cloud/Databases: DBMS, PostgreSQL, MongoDB, SQL, Relational Databases (MySQL, Redis, Amazon SimpleDB), Prometheus, Cassandra
Machine Learning & DevOps Tools: Scikit Learn, TensorFlow, NumPy, Pandas, Matplotlib,DevOps: Amazon Web Services (AWS), Google Cloud, Docker, Git
Concepts: Object-oriented design, Algorithms and Data Structure, Agile, API designs, Application Development, Debugging, System Architecture, Documentation, Linux, Maven Tools & Gradle Projects
Soft Skills: Communication, Collaboration, Team Management,Leadership

Positions of Responsibility/ Certificates

- **Position,** Artificial Intelligence Club- DBIT — *Team Head*
- **Position,** Computer Society of India — *Technical Member*
- **Volunteer,** Covid India National Taskforce — *Technical & Government relations intern*