Osho Priya

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Education

University at Buffalo, State University at New York (SUNY) Buffalo, New York, United States
Bachelor of Science in Computer Science focus- ***Artificial Intelligence***

Manipal Academy of Higher Education, Manipal Manipal, Karnataka, India
Bachelor of Engineering in Computer Science

Skills, Leadership & Achievements

Languages: Python, SQL, C, C++, HTML, CSS, Java.
Frameworks & Tools: Jupyter Notebook, Linux, Agile, AWS, Azure, Docker, Kubernetes, Jira, Scrum, Salesforce, Figma, StarUML, Jenkins.
Coursework: Systems Programming in C, Object Oriented Programming in C++, Engineering Economics and Management, Industrial Psychology, Data Collection, Data Querying, Data Processing, Natural Language Processing (NLP), Data Mining, Pattern Recognition, Machine Learning, Database Management, Database Systems and Scaling, Operating System, Software Development Using Object Oriented Paradigm, Data Structures & Algorithms, Networking Fundamentals, Distributed Systems.

Work Experiences

Information Technology Support Specialist Intern March 2024 – present
Labra.io *New Jersey, Remote*

- Improve the documentation of internal processes, create knowledge base to streamline support operations, and enhance customer satisfaction.
- Provided technical support to over 20 customers weekly, guiding them through complex SaaS solution setups and optimizations for cloud infrastructure and security, significantly improving client compliance and operational efficiency.
- Resolved an average of 40+ weekly customer issues involving AWS and **Salesforce**, and **Hubspot** CRM integrations, enhancing system reliability and user satisfaction.
- Collaborate with cross-functional teams to ensure seamless customer experiences and timely issue resolution.
- Delivered top-tier customers, including IBM, exceptional service, achieving a 100% satisfaction rating through skilled communication and rapid troubleshooting of technical issues.
- Consistently updated team's product knowledge through weekly training sessions based on the latest industry trends, boosting the team's efficiency and solution accuracy by 25%.
- Collaborated closely with the product development team to integrate user feedback into new software features, resulting in a 15% increase in customer satisfaction and a 20% reduction in related support calls.

DevOps Engineer Intern January 2024 – April 2024
IvyNova Solutions, Inc. *Remote, Texas*

- Engineered and automated CI/CD pipelines using Jenkins, optimizing AWS cloud infrastructure and container orchestration with Kubernetes, resulting in a 40% reduction in deployment times and a 25% decrease in server downtime. Enhanced application monitoring with Nagios and DataDog and enforced security protocols with HashiCorp Vault, significantly improving system security posture.
- Led the architectural transformation of a monolithic application into a microservices-based framework, improving modularity and maintainability, which reduced time-to-market for new features by 30% and increased system reliability by 20%
- Developed and implemented robust APIs to enhance service communication across microservices, boosting scalability and interoperability, which supported a 50% increase in transaction volume without compromising performance.
- Utilized Docker to standardize deployment environments across multiple platforms, enhancing application portability and reducing setup and configuration times by over 35%.
- Leveraged Kubernetes for dynamic microservice orchestration, optimizing resource allocation and achieving 99.9% uptime, thus enhancing scalability and operational efficiency.
- Strategically integrated Azure DevOps pipelines for CI/CD, accelerating development cycles by 40%, which enabled more frequent and reliable application updates and deployments.

Student Assistant September 2022 – May 2023

University at Buffalo, Lockwood Library *Buffalo, NY*

- Mastered Microsoft Excel to transform data organization and streamline project management processes, enhancing data flow comprehension for business analysis projects, which increased operational efficiency by 20%.
- Collaborated with supervisors and diverse team members to update and maintain a comprehensive book database, ensuring data accuracy and timely accessibility for teams, thereby improving library resource management efficiency by 25%.
- Designed and deployed an advanced chatbot using Google Dialogflow, integrating seamlessly with the library's database to automate responses to common inquiries. This innovation enhanced user engagement by 40% and showcased my technical proficiency in developing and deploying cloud-based AI solutions.
- Led IT support for a critical chatbot service, managing troubleshooting, performance optimization, and regular updates to maintain a 99% uptime. Actively collaborated with library staff to gather user feedback and refine the chatbot's functionalities, enhancing user satisfaction and service quality by 30%.

Data Analyst Research Assistant May 2021 – December 2021

Geography Department, University at Buffalo *Buffalo, NY*

- Conducted sophisticated correlation analysis using Python to identify a significant correlation (coefficient of 0.55) between sea-ice concentration and snow depth, indicating the impact of Lake Erie ice cover on regional snow accumulation patterns, which informed local climate change adaptation strategies.
- Utilized linear regression models to quantify the relationships in climatic variables, revealing that minor increases in sea-ice concentration and precipitation significantly affect snow volumes, providing critical data for environmental policy making and resource allocation in weather-sensitive sectors.
- Synthesized research findings to conclude the predominant influence of Lake Erie ice cover on Buffalo's snowfall, advocating for extended scientific investigation to enhance predictive models and regional preparedness against extreme weather conditions.

Data Analyst Intern October 2020 – January 2021

Society for Space Education, Research and Development (SSERD) *Remote, India*

- Led and Managed team CHAAND (Collective Hive of Advanced Autonomous Navigation and Design) to design a Swarm Rover System to serve for mineral excavation and establish a mesh of lunar communication-network.
- Conducted a comprehensive analysis of project pain points using SWOT (Strengths, Weaknesses, Opportunities, Threats) methodology, leading to strategic adjustments that enhanced project efficiency by 20%.
- Implemented Kaizen continuous improvement techniques to refine our lunar communication network proposal, significantly enhancing the deployment efficiency and reliability of the Swarm Technology Dispersion system.

Leadership & Achievements

President UBSEDS (2021-2022): Served as President of UBSEDS (University at Buffalo Students for the Exploration and Development of Space), where I spearheaded initiatives to promote space education, including organizing the Fall 2021 Welcome Weekend and hosting a seven-day World Space Week, which attracted high-profile speakers and increased club membership by 80%. **Raised funds** from SEDS USA to send club members for SpaceVision held at NASA's Johnson Space Center, Huston.**Created budgets**, **applied for grants** and **got sponsors** to attend IREC SpacePort America annual competition in coordination with the executive board.

UBHacking Co-lead (2021): Co-led UBHacking 2021, securing funding and coordinating logistics for the largest annual hackathon event at the university, which hosted over 300 participants and fostered innovation in software development among students.

Team lead - NASA L'Space NPWEE Proposal Writing and Evaluation(2020): Led a multidisciplinary team spread across different time-zones in the US during the NASA's L'Space NPWEE Proposal Writing and Evaluation program, facilitating effective communication and collaboration that resulted in the development of a high-quality proposal under strict timelines, ultimately enhancing our team's project management and technical writing skills.

Mars Rover Manipal (2019): Played a key role in organizing the Indian Rover Challenge 2019 at Manipal Institute of Technology, overseeing team logistics and the reception of international participants, which contributed to a successful competition and enhanced global collaboration. Also performed the duties of our Rover's Mechanical Engineer including CATIA design and finite component analysis on ANSYS.

Awards & Recognition: GHC'23, GHC Scholar '21; MAHE Colloquium Youngest Research Poster Presenter '19. Recognized for outstanding contributions to technology and research with accolades including GHC Scholar '21 and Youngest Research Poster Presenter at the MAHE Colloquium '19, reflecting my commitment to advancing knowledge and leadership in STEM fields.

Projects

Neural Network and CNN Analysis

- Achieved accuracies of 85-86% in neural networks with 1, 2, and 3 hidden layers using a learning rate of 0.1.
- Observed a gradual decrease in accuracy with an increase in the number of hidden layers when a regularizer is applied through each layer.
- Noted a considerable drop in accuracy to approximately 10% when the regularizer is set to a large value of 5.
- Recorded low accuracy of 10% in Convolutional Neural Networks (CNNs) using the same learning rate of 0.1.
- Significantly improved CNN accuracy to 93% by reducing the learning rate to 0.01.
- Further enhanced CNN accuracy to 94% after augmenting images, which increased the dataset size.

Newspaper Agency Automation Software

- Developed software for the manager of a local newspaper and magazine delivery agency that can automate various clerical activities associated with its business.
- Simulated data that is generated by newspaper/magazine agencies, users in the town, and each delivery person.
- Created databases from the simulated data in SQLPlus.
- Created a front-end User Interface (UI) for the manager to add/delete/modify/update/or perform different operations/calculations for the budget sheet and clerical activities.
- Developed the said UI using Java Swings.
- Established JDBC connection between SQLPlus Databases and the JAVA UI.

Data Science Undergrad Researcher at NASA's (L'SPACE) Mission Concept Academy

- Designed mission statement, Concept of Operations (COO), major milestone schedule, verification and validation plans, risk mitigation, budget, and scheduling.
- Optimized ice-crystal extraction search using Bayesian Optimization and Kalman Filter.
- Evaluated that the optimization can help determine water-ice content in the top 1 meter of regolith to an accuracy of ∼+-1 % or better, or at a spatial sampling of ∼100m for a location in Permanently Shadowed Region (PSR).
- Identified that this technique will help data scientists generate advanced and more efficient algorithms for mapping and extracting water ice for future Artemis missions.

Flight Booking System Software

- Developed a comprehensive flight booking software, leveraging Object-Oriented Programming (OOP) principles to ensure modularity and scalability. Utilized the StarUML framework to create detailed software design diagrams that facilitated a clear understanding of the system architecture.
- Focused on robust development of the flight booking software by implementing essential features such as flight search, booking, user authentication, and payment processing, ensuring a user-friendly interface and secure data handling.
- Created extensive UML (Unified Modeling Language) diagrams using the StarUML framework to visualize and document the software design. This included class diagrams for database design, sequence diagrams for mapping out the interaction between system components, and activity diagrams to outline the flow of processes.

- Iterated through all phases of the Software Development Life Cycle (SDLC) from requirements gathering, system analysis, and design to implementation, testing, deployment, and maintenance. This iterative approach ensured that the software met all user requirements and was free from critical bugs at launch.
- Conducted multiple rounds of testing including unit testing, integration testing, and system testing to validate the functionality and performance of the software. Adjustments were made based on feedback to enhance system reliability and user satisfaction.
- Managed project timelines and deliverables using Agile methodologies, which facilitated regular updates and iterations based on stakeholder feedback, resulting in a high-quality, market-ready product.

Web Application Development

- Spearheaded the development of 'Lifesavers,' a comprehensive health tracking web application designed to assist users in monitoring and improving their daily health habits. The platform features a user-friendly interface for tracking exercise routines, sleep patterns, and calorie intake.
- Utilized Figma to create and refine the UI/UX design, focusing on ease of use and accessibility to ensure that users of all tech-savviness could navigate and benefit from the application effectively. Conducted user testing sessions to gather feedback and iteratively improve the design based on user inputs.
- Implemented SCRUM methodologies to manage the project, facilitating sprint planning, daily stand-ups, sprint reviews, and retrospectives to ensure timely delivery of project milestones while adapting to evolving project requirements.
- Managed backend data operations using MyAdminDatabase and SQL, designing a robust database schema to handle large volumes of user data securely and efficiently. Implemented complex SQL queries to generate insightful reports and real-time health analytics for users.
- Enhanced user engagement by integrating motivational quotes and health tips into the application, which were dynamically served based on user activity and preferences. This feature significantly improved user retention and daily active use.

Twitter Sentiment Analysis

- Conceptualized and designed a real-time Twitter sentiment analysis system, focusing on capturing and analyzing public opinions from Twitter data.
- Developed a robust Python-based data pipeline to fetch, process, and analyze tweets in real-time. This included setting up streaming APIs to continuously collect tweets and preprocessing the data to remove noise and normalize text.
- Implemented Natural Language Processing (NLP) techniques to classify tweets into positive, negative, and neutral categories with an 85% accuracy rate. Utilized advanced machine learning models such as support vector machines (SVM) and recurrent neural networks (RNNs) to enhance classification precision.
- Deployed the analysis system on Amazon Web Services (AWS) to leverage scalable cloud computing resources, ensuring high availability and responsiveness of the sentiment analysis service during peak traffic times.
- Designed and integrated dynamic visualizations of sentiment analysis results using technologies such as D3.js and Plotly. This enabled stakeholders to view sentiment trends in real-time, facilitating immediate strategic decisions based on public opinion.
- Collaborated closely with cross-functional teams to ensure seamless integration of the sentiment analysis module with existing corporate systems, enhancing overall business intelligence capabilities.

Healthcare Data Analysis

- Initiated and conducted comprehensive nationwide surveys across various U.S. Facebook groups to gather data on a rare medical condition not widely researched- Hidradenitis Suppurativa. This involved designing survey questions that accurately captured essential data points relevant to the condition. Managed the distribution and collection of survey responses, ensuring a diverse and representative sample of the population.
- Performed meticulous data cleaning and preprocessing to ensure the accuracy and usability of the collected data. This included removing inconsistencies, handling missing values, and standardizing data formats, which facilitated more reliable analysis.
- Utilized advanced data visualization techniques to identify and illustrate disease patterns and trends. Created detailed graphs and charts using tools such as Tableau and Python libraries like Matplotlib and Seaborn, which helped in understanding the distribution and impact of the condition across different demographics.

- Developed and proposed innovative machine learning-based management strategies to address the challenges associated with the medical condition. Applied models like logistic regression and random forests to predict disease outcomes and assess risk factors. The strategies were aimed at improving diagnostic accuracy and tailoring patient management approaches, enhancing overall healthcare delivery for individuals affected by this condition.

American Sign Language Classification

- Designed and implemented a sophisticated machine learning project aimed at classifying American Sign Language (ASL) words from acoustic images using a Convolutional Neural Network (CNN).
- Developed a custom data preprocessing pipeline to handle acoustic images of ASL signs, enhancing image quality and feature visibility for improved model accuracy. Techniques included image normalization, resizing, and augmentation to increase dataset variability and prevent overfitting.
- Utilized state-of-the-art CNN architectures to extract detailed features from acoustic images, training the model to recognize and differentiate between distinct ASL signs with high precision.
- Employed advanced techniques in machine learning and neural network optimization such as dropout, batch normalization, and learning rate adjustments to enhance training efficiency and model generalization.
- Validated the model's performance through rigorous testing on a separate validation dataset, achieving significant accuracy in classifying ASL words, thereby demonstrating the model's effectiveness in real-world scenarios.
- Integrated the trained model into an interactive application for educational purposes, allowing users to learn and practice ASL through a user-friendly interface, enhancing accessibility and learning outcomes for ASL students.

BeInSync - Mutual Mentorship Platform — React, JavaScript, Docker, Firebase Authentication

- Addressed the challenge of scarce and expensive professional mentoring by creating BeInSync, a mutual mentorship platform at the Hack your Innovation Hackathon.
- Implemented Docker for a consistent development environment, containerized deployment, scaling, and resource efficiency. Utilized Docker for dependency management, integrated it into the CI/CD pipeline, and ensured isolation and security.
- Enhanced collaboration, team workflow, and reproducibility through Docker, allowing for versioning and easy deployment across various hosting environments.

Data Analytics for Real Estate Digital Enhancement (Proof of Concept)

- Developed a conceptual data analytics platform for a theoretical NYC real estate company, integrating advanced analytics with digital and in-store strategies using Python, NumPy, Pandas, Matplotlib, and Jupyter Notebook.
- Conducted data cleaning, transformation, and exploratory analysis to extract user behavior insights from simulated digital platform interactions. Utilized linear regression to evaluate the potential impacts of various digital features on user engagement and conversion rates.
- Implemented the Apriori algorithm to analyze simulated customer interaction data, uncovering patterns and associations to guide the creation of targeted marketing campaigns and personalized property recommendations.
- Created a predictive model with SciKit-Learn, Keras, and TensorFlow to estimate housing prices from mock data, achieving high accuracy in simulations which demonstrated the model's potential to support real-world investment and pricing strategies.
- Proposed enhancements to marketing strategies by leveraging insights from itemset analysis, aiming to improve the efficiency of cross-selling and communication in both digital and physical realms based on theoretical data.
- Managed the project using Agile methodologies, focusing on iterative development and continuous integration of feedback to refine the analytics platform, showcasing its potential impact on business performance by 25% in simulated environments.