DIYA PRASANTH

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EDUCATION

Purdue University   West Lafayette, IN
B.S Computer Science, Concentration: Machine Learning   *08/2021 - 12/2024*
- Relevant Coursework: Machine Learning, Artificial Intelligence, Data Structures & Algorithms, Object-Oriented Programming, Analysis of Algorithms
- Head TA (Teaching Assistant) for Object-Oriented Programming course → taught lectures weekly with audiences of 500
- TA for Computer Architecture, Data Science, Systems Programming, Databases, Algorithms courses

Purdue University   West Lafayette, IN
B.S Data Science   *08/2021 - 12/2024*
- Relevant Coursework: Statistical Methods, Data Mining, Data Visualization, Database Systems, Probability Theory, Large-Scale Data Analytics

EXPERIENCE

Data Engineering & Machine Learning Intern   06/2024 - 08/2024
Dover Fueling Solutions   *Austin, TX*
- Developed an LLM-based solution with LangChain and RAG in Python, for AI insights deployable for customer and internal use.
- Created Python visualizations to monitor CPU and memory usage of edge services, aiding performance optimization.
- Used Python to analyze extensive logs, extracting key data insights on device message types for troubleshooting.

Software Engineering Intern   06/2023 - 08/2023
Dover Fueling Solutions   *Austin, TX*
- Optimized Azure cloud-to-edge communication for secure IoT device connectivity, ensuring reliable data transfer
- Developed C# algorithms to parse and decrypt IoT messages for accurate data display on Azure cloud hosted application
- Utilized Docker and Microservices to modularize application architecture
- Implemented query capabilities for clients to access real-time IoT & edge device data, enabling informed fueling decisions

Discovery Park Research Intern   01/2023 - 06/2023
Purdue University   *West Lafayette, IN*
- Designed permission-based blockchain platform for health clinics to securely share patient info. in Python & Go
- Developed smart contracts and implemented the Practical Byzantine Fault Tolerance (PBFT) consensus mechanism
- Utilized data encryption algorithms to ensure the confidentiality of patient information
- Presented findings and engaged in discussions at Purdue University's most prominent undergraduate research event

Vertically Integrated Projects (VIP) Research Intern   08/2022 - 12/2022
Purdue University   *West Lafayette , IN*
- Developed a CNN (Convolutional Neural Network) model for urban pedestrian detection with Prof. Delp at Purdue
- Leveraged techniques such as gradient descent and backpropagation to optimize model parameters
- Evaluated the effectiveness of the You Only Look Once (YOLO) algorithm for project purpose

PROJECTS

Restaurant Management System | *Python Flask, MySQL,React*
- Utilized MySQL indexes for efficient querying and ensured ACID compliance for database transactions
- Implemented stored procedures and parameterized queries to protect against SQL injection attacks

Reinforcement Learning-based Balancer | *Python, Seaborn, SciPy, Pytorch*
- Developed a reinforcement learning algorithm to balance a CartPole, optimizing stability and performance
- Experimented with reward functions and hyperparameters, enhancing model efficiency and convergence.

TECHNICAL SKILLS

Languages: Java, Python, C/C++/C#, Go, R, Shell Scripting, JavaScript, HTML/CSS
Frameworks: React, Node.js, Flask
Tools & Libraries: Docker, Kubernetes, Google Cloud, Microsoft Azure, Git, MySQL, Neo4j, MongoDB, TensorFlow, Scikit-Learn, Pandas, NumPy, Matplotlib, LangChain

ORGANIZATIONS

Microsoft TEALS
AP Computer Science Instructor at DeSOTO High School

Computer Science Teachers' Association
Advocate for Expanding Computer Science Education to Underserved Schools