LAKITH PUSARLA

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EDUCATION

GEORGE MASON UNIVERSITY Fairfax, VA
Master of Science in Computer Science (Machine Learning concentration); GPA: 3.8 / 4.0 08/2022-05/2024
Courses: Data Mining, Mining Massive Datasets, Machine Learning, Natural Language Processing

GITAM UNIVERSITY Visakhapatnam, India
Bachelor of Technology, Computer Science and Engineering; GPA: 8.9 / 10 06/2015-04/2019

SKILLS

- Languages: Java, Python, JavaScript, C++, C, Swift.
- Database: SQL, NoSQL, PostgreSQL
- Big Data: PySpark, MapReduce, Hadoop
- Data Science: Deep Learning, Machine Learning, Neural Networks, NLP, NumPy, Pandas, Scikit-learn, TensorFlow
- Embedded Systems: Google Coral, Raspberry Pi, Raspberry Pico, Arduino Uno, Arduino ESP 32 Feather
- Web Technologies: NodeJS, AngularJS, HTML, CSS.
- DevOps & Tools: Git, Jenkins, Docker, Kubernetes, Postman, Jira, AWS.

EXPERIENCE

GEORGE MASON UNIVERSITY **Fairfax, VA**
Research Assistant – CIAO Labs 03/2023-09/2023

- Developed **multi-agent system** to operate in dynamic and contested environments using sensor-actuator pairs for **Office of Naval Research for Distributed Intelligence**.
- Processed 10k+ images with an impressive 87% precision through **Google YOLO V5** reducing manual processing by 90%.
- Restructured system architecture towards a modular design, promoting loose coupling for efficient troubleshooting and enhanced collaborative development.
- Integrated **FPV** camera feed utilizing **UDP** for 20% lower latency data transfer rate and 42% more responsive control leading to landslide victory in inter university robotics competition.

JOHNSON & JOHNSON (TATA CONSULTANCY SERVICES) Bangalore, India
APIGEE API Engineer 04/2019-08/2021

- Designed scalable and secure micro-service using **Google APIGEE**, adhering to Agile SDLC methodologies and enhanced **REST API security** with authentication mechanism.
- Deployed bi-directional data synchronization between **Salesforce** and **RDS** using API endpoints, scripted **BASH** scripts via **CRON** to monitor sync status and transactions. This reduced manual efforts by 80% and data fixes by 53% via proactive error identification and inconsistency resolution.
- Engineered novel **API endpoints** to support diverse marketing campaigns, leading to a significant 30% increase in new user acquisition, a substantial 43% growth in daily user activity, and a noteworthy 12% improvement in healthcare professional partner engagement.
- Configured **triggers** within **Salesforce Marketing Cloud** to facilitate real-time notifications and one-time passwords (OTPs) for both healthcare professionals and consumers with **<10sec latency**.

Data Engineer 04/2019-08/2021

- Migrated operational database to **AWS RDS (PostgreSQL)** and created reusable data schemas resulting in 45% reduced overhead costs, while internalizing operations.
- Analyzed logs and patterns collected with **AWS S3** and guided Backend/Middleware Support Team, ensuring effective issue resolution, automations and client support, contributing to sustained user satisfaction for over 400,000 users.
- Spearheaded async-await, regex implementation in **PostgreSQL**, boosting data processing and database efficiency by 50%.

PROJECTS

DemoNSF: Multi-task Demonstration based Generative Framework for Noisy Slot Filling Task 03/2024-05/2024

- Constructed a noisy slot filling model using demonstration-based pertained model architecture and added noisy auxiliary tasks to handle imperfect data for slot filling task using **Conditional Random Fields**.
- Implemented augmentation techniques for raw data at character, word and sentence level to increase model robustness by 38%
- Utilized **demonstration based fine tuning** to leverage corrective demonstrations to refine and enhance model's performance, leading to high F1 scores.

Airline Delay Analysis at Scale using PySpark 10/2023-11/2023

- Performed extensive exploratory analysis and identified meaningful insights on FAA data (25 million records) using **PySpark**, **SQL** and **Pandas**.
- Leveraged machine learning methodologies to construct predictive models for airline flight delays, achieving an RMSE of 0.85. Implemented **data visualization** techniques to effectively communicate the discovered trends and intricate relationships influencing these delays.

Fake Job Postings Identification 08/2023-09/2023

- Created **PySpark** application for classifying job postings as fake or real using extensive text pre-processing and several machine learning models.
- Achieved an F1 score of 0.8956 and best accuracy of 0.8957 using a well tuned Random Forest Classifier.

AWARDS & ACHIEVEMENTS

- Secured a **3 year grant** from the **Office of Naval Research** (ONR) in recognition of our team's victory in "**Defend the Republic**" robotics competition, surpassing teams from seven universities across the United States. (March 2023)
- Bestowed with "**Best Team Award**" by Johnson and Johnson's senior management, recognizing APIGEE team's exceptional contributions to development, customer support, critical issue resolution, and driving significant user growth. (December 2020)