Aaditya Gurav

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WORK EXPERIENCE

TruWeatherSolutions, Software Developer - New York — June 2023 - Current

- Established data pipeline in AWS by leveraging technologies such as Lambda, SQS and S3 to process and archive data, alongside publishing it on an MQTT server and enabling user access through a Node based REST API for swift data retrieval.
- Reduced AWS monthly expenses by $3,000 through right-sizing instances, leveraging Reserved Instances, implementing Auto Scaling, and optimizing storage and idle resources.
- Conducted a comprehensive overhaul of TWS's workbook using ReactJS to enhance user experience and performance.
- Integrated more than10 weather sensors using various techniques and protocols such as REST API's, Modbus and by directly interfacing with them via cloud. Processed the data using AWS tools like Kinesis and Lambda, storage using DynamoDB and S3.

TruWeatherSolutions, Software Developer Intern - New York — December 2021 - May 2023

- Developed an alerting system to notify clients about specific weather events in designated regions. Implemented the system using SailsJS and utilized RabbitMQ for event management.
- Designed a Server Sent Events (SSE) interface which helped clients for rapid data retrieval through REST API and web sockets.
- Reengineered the next version of the system architecture with enhanced security standards and improvements in database structure, fault tolerance, data retrieval, storage, and performance.

Quickwork, Software Developer Intern – India — November 2020 - July 2021

- Successfully developed over 100 client-specific connectors for workflow automation using REST APIs and collaborated with the front-end development team to create web pages, leveraging technologies like React and NodeJS to ensure smooth user experiences.

Reliance, Data Analyst Intern - India — June 2019 - July 2019

• Designed a machine learning model for real-time Gas to Water Ratio estimation in oilfields, leveraging data on Humidity, Depth, and Soil Content, using SVM, SVR, and TensorFlow, achieving an 88% accuracy; also generated data visualization reports using Tableau for oilfield trend analysis, supporting strategic drilling location decisions.

EDUCATION

Syracuse University Master of Science in Computer Science, Syracuse NY — August 2021 – May 2023

Relevant Courses: Artificial Intelligence, Data Science, Design and Analysis of Algorithms, Object Oriented Programming with C++, Deep Learning for Theorem Proving, Operating Systems, Computer Architecture and Natural Language Processing.

Bachelor of Engineering in Computer Engineering, Mumbai University, Mumbai India — June 2016 - October 2020

SKILLS

Programming Languages - C++, Python, JavaScript, Kotlin, Swift.

Technical Stack - NodeJS, ReactJS, EC2, S3, DynamoDB, Lambda, Kinesis, RDS, Elastic Beanstalk, API Gateway, Firebase, MongoDB, Android Studio, XCode, Anacoda, Jupyter Notebook, VSCode, Docker, Jenkins and Gitlab.

PROJECTS

Movie Recommendation Using Collaborative Filtering — August 2022 - December 2022

• Implemented Collaborative Filtering techniques in the system, resulting in significantly reduced processing time.

• Utilized PCA & SVD for data preprocessing, leading to reduced execution time and improved efficiency.

Neural Network based Artificial Intelligence System — August 2022 - December 2022

• Implemented an AI system for Connect 4, using a combination of Minimax Algorithm and Neural Networks to learn heuristics.

• The Neural Network-based AI outperformed the baseline AI significantly.

Image Recognition App for iOS — January 2022 - May 2022

• Created an image recognition app for iOS that accurately identifies around 100 animals. The app retrieves relevant information about the recognized animal from Wikipedia's REST API.

• Leveraged Apple's ARKit to enable users to visualize the recognized animal in augmented reality (AR) for a more immersive experience.

Deforestation detection using Deep Learning — August 2019 - December 2019

• Developed a model to identify deforestation in hilly and remote regions, utilizing Deep Learning tools. Trained the model with around 10,000 real-time images collected from USGS.

• Employed Tensorflow GPU to expedite the training process and integrated a simple frontend using Flask. The model achieved an accuracy of approximately 91%.

ACHIEVEMENTS

- Published "*Using deep learning on satellite images to identify deforestation/afforestation*", In *International Conference on Computational Vision and Bio Inspired Computing* (pp. 1078-1084). Cham: Springer International Publishing.
- Secured 2nd rank at ByteCamp, a national level hackathon for Covid dashboard in December 2019.

CERTIFICATIONS

- AWS Certified Solutions Architect – Associate | Amazon Web Services | December 2023
- AWS Certified Cloud Practitioner | Amazon Web Services | September 2023