

Objective

Support and enhance client DevOps across teams with standardized tools, Windows Docker virtualization, and a DevOps culture for efficiency and innovation in gas analyzer development.

CASE STUDY

Scope

- Standardize the use of DevOps tools across different client teams.
- Implement Windows Docker virtualization for various Windows flavors used in Zero
- Reference Modules for isotope instruments in gas analyzers.
- Cultivate a DevOps culture among teams that traditionally did not use DevOps tools.

Solution

- ✓ Introduced and nurtured a DevOps culture across multiple teams, ensuring an understanding and adoption of DevOps methodologies and practices.
- ✓ Completed various DevOps assignments, including the migration of jobs from TeamCity to Jenkins, which streamlined CI/CD processes and improved deployment efficiencies.
- ✓ Implemented Windows Docker containerization for the Zero Reference Module, enhancing the portability and scalability of applications used in gas analyzers.

Value Added

- Introduced DevOps practices, boosting collaboration, accelerating development, and improving project agility.
- Standardized DevOps tools like Jenkins, Docker, and Python3 for consistent and efficient outcomes.
- Employed Windows Docker for gas analyzer virtualization, enhancing testing and deployment.
- Transitioned from TeamCity to Jenkins, optimizing CI/CD pipelines for faster turnaround and resource management.

Frameworks & Tools



Objective

Develop a Grafana-based frontend and backend application for data monitoring, enhancing the visualization and management of data collected from gas analyzers.

CASE STUDY

Scope

- Staff augmentation to assist the client's team in developing a robust data monitoring application using Grafana integrated with React.
- Customize Grafana through direct coding in React and conduct comprehensive testing to ensure functionality and reliability.

Solution

- ✓ Skilled React developers implemented advanced Grafana customizations.
- ✓ Customized Grafana admin console with additional functionalities using React.
- ✓ Implemented Jest unit tests for code integrity and performance verification.

Value Added

- **Domain expertise:** Leveraged VAST's knowledge in non-conventional energy for tailored solutions.
- **Advanced customization:** Implemented ReactJS for complex Grafana customizations, enhancing functionality.
- **Quality assurance:** Ensured reliability through comprehensive Jest testing.
- **Collaborative development:** Fostered efficiency and communication between VAST and client teams.

Frameworks & Tools



Objective

Develop a ReactJS app with dashboards and visualizations for monitoring windmill and solar panel data on the SynaptiQ platform, aimed at boosting analytics and user experience.

CASE STUDY

Scope

- Staff augmentation with VAST senior React developers to collaborate with the client's team and their vendor's team in developing the application.
- Interact with client business analysts to thoroughly understand the requirements.
- Deliver high-quality ReactJS code, maintaining existing features and developing new functionalities.

Solution

- ✓ Deployed experienced React developers who were proficient with both old (class components) and new (React hooks) versions of ReactJS, ensuring seamless development and integration with existing codebases.
- ✓ Recommended and implemented Jest for unit testing to enhance code quality and reliability.
- ✓ Facilitated smooth and productive remote collaboration with cross-cultural teams, leveraging VAST's experience in similar international projects.
- ✓ Provided an effective offshore development team, fulfilling the client's need for cost-effective project execution while maintaining high standards of software development.

Value Added

- **ReactJS expertise:** Skilled in legacy and modern React architectures for robust development.
- **Quality assurance:** Improved reliability with Jest unit testing.
- **Collaboration:** Efficient international team communication and workflow management.
- **Cost-efficient development:** Experienced developers integrate seamlessly for cost savings.

Frameworks & Tools



Objective

VAST and a US wireless communication supplier collaborated on a real-time analytics platform for mines, focusing on data monitoring and analysis. Leveraging architecture consulting, VAST delivered a scalable solution.

CASE STUDY

Scope

- Ingest the streaming data emitted by the communication system in real-time.
- Process the data efficiently to derive meaningful insights and analytics.
- Provide real-time visualization of the analytics to enable monitoring and decision-making.
- Be scalable to handle large volumes of data emitted by the communication system across multiple mines.
- Recommend a technology stack that could support the requirements for real-time data processing and visualization.

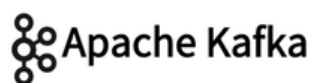
Solution

- ✓ Conducted a comprehensive analysis of the client's requirements and designed a detailed architecture for the real-time analytics platform.
- ✓ Leveraged cutting-edge technologies such as Spark, Kafka, Python, and React to enable real-time data ingestion, processing, and visualization.
- ✓ Ensured the solution provided scalability, flexibility, and performance, effectively addressing the client's challenges.

Value Added

- Created a scalable architecture to manage large streaming data volumes, ensuring future growth aligned with client needs.
- Proposed Spark, Kafka, Python, and React for real-time data processing and visualization.
- Worked closely with client stakeholders to address challenges and improve the solution.
- Applied microservices architecture and containerization, ensuring robustness, maintainability, and scalability.

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Objective

Create a one-stop solution to assess the device availability and quality using different parameters for a plant.

CASE STUDY

Scope

- Develop a comprehensive analysis and validation tool for data produced by renewable assets in a plant
- Process and analyze data from devices and sensors for availability over time and quality.
- Provide data analysis at various levels, from plant-wide to individual sensors.
- Offer visual representation for successful and failed validations at different levels.

Solution

- ✓ VAST developed a plant data analysis tool to validate and visualize all data produced by different devices set up in a plant.
- ✓ The tool processes and analyzes data for availability and quality, using hundreds of different parameters.
- ✓ It provides a clear visual representation of data validation outcomes at various operational levels.

Value Added

- **One-Stop Solution:** Delivered a comprehensive tool that handles all aspects of data validation for various devices across multiple parameters
- **Detailed Analysis:** Enabled detailed quality and availability checks for data at multiple levels from plant-wide to individual sensors
- **Client Collaboration:** Maintained continuous collaboration with the client, ensuring progressive and timely delivery of the solution tailored to their needs.

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Objective

To automate the HR hiring process from scanning resumes to carrying pre-employment cheques

CASE STUDY

Scope

- Created campaigns/drives for each position, configuring questions, grading, and tracking answers
- Developed reports and analytics for the recruitment company to monitor and optimize recruitment processes
- Enabled video screening scheduling to enhance the candidate evaluation process
- Created an inventory of strong candidates with details on their availability.

Solution

- ✓ Created campaigns/drives for each position, configuring questions, grading, and tracking answers.
- ✓ Developed reports and analytics for the recruitment company to monitor and optimize recruitment processes.
- ✓ Enabled video screening scheduling to enhance the candidate evaluation process.
- ✓ Created an inventory of strong candidates with details on their availability.

Value Added

- Provided tools that increased recruiter productivity by 90%, streamlining their workflows.
- .Integrated NLP to screen thousands of resumes efficiently.
- Implemented automated communication systems to improve engagement with candidates
- Enabled data-driven decision-making that improved hiring output.

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Objective

Streamline the online product discovery and purchasing process that traditionally relies on manual or text-based searches. Utilize AI and computer vision to allow users to snap a picture of a product and seamlessly initiate a purchase from affiliate platforms like Amazon and Flipkart.

CASE STUDY

Scope

- The client approached VAST to enhance online shopping by replacing traditional search methods with AI and computer vision
- This technology allows users to snap a photo of a product and seamlessly initiate purchases on platforms like Amazon and Flipkart, streamlining the buying process and reducing missed opportunities.

Solution

- ✓ Spearheaded the development of a custom solution centered around a Convolutional Neural Network (CNN) for object detection and processing.
- ✓ Employed Python, TensorFlow, and deep learning techniques to develop a robust system capable of accurately identifying products from user-captured images.
- ✓ Integrated the solution with the client's existing infrastructure, providing a user-friendly interface developed with React and React Native.

Value Added

- Enhanced data quality, model optimization, and real-time processing through teamwork, exceeding performance goals.
- Boosted project success by promoting collaboration between client experts and our technical team, quickly adapting to changing business needs.

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