

# Lokesh Palacharla

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## Summary

Self-motivated Cloud Solutions Architect, with 8+ years of technical experience in computer science, engineering, and business development in highly competitive segments of the consumer appliances, Energy, and Banking domains. Experienced at working in a fast-paced start-up environment and a well-established multinational company. Capable of wearing multiple hats to deliver the best results with limited resources

## Professional Experience

### Bank of America

*Solutions Architect*

**Allen, TX, USA**

*February 2022 - Present*

- Delivered 3 major, 5 medium, and 9 minor architecture deliverables within the last 24 months, saving ~ \$1.2 MM hardware costs by transitioning to an event streaming & SOA-based application design.
- Spearheaded the end-to-end design and implementation of omnichannel marketing data pipelines across digital, contact center & financial centers, leveraging API integration for seamless data flow.
- Re-designed an application logging framework, eliminating MQ usage, Cassandra storage, and duplicate blob messages, resulting in up to \$4.2 MM in maintenance cost savings over the next 5 years.
- Implemented a near real-time data pipeline handling 3.5K TPS volume, enabling personalized customer journey via Adobe Experience Platform (AEP) and Analytics, analyzing customer clicks and interactions on digital channels.
- Provided a personalized event streaming integration pattern for capturing customer disposition data and persisting on the Hadoop platform, reducing TCOA costs of the implementation.
- Led a team of offshore architects, exploring new technology solutions, presenting essential comparisons, pros/cons, and target use cases for discussions in the architecture forum.

### CIMCON Lighting

*Cloud and Data Visualization Specialist*

**Burlington, MA, USA**

*October 2020 - February 2022*

- Designed and developed an end-to-end rule engine using AWS IoT services to send alerts and event notifications via APIs from StreetVibecloud, improving user engagement and experience.
- Reduced data pipeline costs by 68.4% by implementing S3 incremental update feature and server-less architecture using AWS Lambda functions, demonstrating enterprise cost optimization and efficiency.
- Modeled and articulated highly scalable technical data solutions leveraging the AWS cloud platform, contributing to the development of IoT solutions for global smart cities and validating predictive analytics platform using AWS Machine Learning stack.
- Led a team of four offshore engineers, and provided technical guidance on coding standards and tools, ensuring adherence to enterprise best practices and standards.
- Implemented a 80% improvement in deployment and development times for visualization module by leveraging JavaScript prototypes, benefiting every new client and demonstrating end-to-end development expertise.

### CIMCON Lighting

*Data Engineer*

**Burlington, MA, USA**

*January 2020 - July 2020*

- Implemented an end-to-end user role-based authentication system on AWS Cognito, IoT Analytics, Glue, Athena, and Lambda, integrating with third-party federated identities like Microsoft AD and Google account, enabling seamless collaboration with social media handles and APIs.
- Developed a data pipeline for real-time IoT analytics using Azure Databricks workspace with Apache Spark, enabling end-to-end development and validation of AI-based prototypes for IoT data analysis.
- Led the design & architecture of a real-time alerting system for Gunshot detection, utilizing AWS IoT Events and IoT Things graph, enhancing enterprise security, and leveraging Machine Learning for proactive threat detection.
- Developed a custom Java application with BI driver container, deployed on AWS EKS, ensuring efficient enterprise application development.
- Implemented Air Quality forecast using AWS Machine Learning stack and achieved 96.7% accuracy in predicting traffic congestion, creating interactive dashboards in Metabase, AWS Quicksight, Tableau, Power BI, and Grafana, validating the AI-based forecasting models.

### Tech Mahindra

*Software Engineer*

**Hyderabad, Telangana, India**

*August 2016 - December 2018*

- Enhanced efficiency by 41% by building an incentive accrual application plugin, providing a solution in <2hrs, and optimizing Oracle ERP application support services.
- Executed change requests resulting in fixing ~ 3M bad data, functioning as a PLSQL and Shell Script developer.
- Automated reporting in MS Access DB with PLSQL scripts, handling critical migrations and enhancements of the reporting and accruals application.

**BrainVita Pvt Ltd.**  
*Application Engineer*

**Kakinada, Andhra Pradesh, India**  
*March 2015 - May 2016*

- Worked as a back-end developer and database manager on a project named Handyman on call - (HOC) an Android application.
- Spiced up the image gallery of the app using JavaScript, CSS and responsible for the encryption of the passwords.

## Education

**Northeastern University**  
*Master's, Data Analytics*

January 2019 - August 2020  
*GPA: 3.87*

- Predictive Analytics, Data Mining, Probability and Statistics, Database management systems, Information technology, Project management, Data Visualization and Business Intelligence, Information Systems Design and Development.

## Certifications

Google Cloud Certified Professional - Cloud Architect  
AWS Solutions Architect - Professional

## Projects & Outside Experience

### Monolithic Apps Migration to Service Oriented Architecture Apps

*Solutions Architect*

*February 2022 - July 2023*

- Designed and implemented the migration of a monolithic offers management app to a Service-oriented Architecture application, following Agile development practices and staggered approach.
- Broke down each functionality into individual service components supporting fetch, modify, and create operations, enhancing application development and architecture.
- Integrated Splunk for cloud-native logging and monitoring, contributing to improved management and information security of the platform.

### StreetVibe Cloud for IoT Sensors

*Data Visualization Engineer*

*January 2020 - July 2020*

- Led the development of the first edition of Streetvibe platform for NearSky360 devices, launching it within 3 months, demonstrating agility in project delivery.
- Developed a communication channel between MongoDB atlas cluster with a Java based visualization tool through MySQL BI connector.

### Hand-Written Image Predictions

*March 2020 - June 2020*

- Designed and implemented a Hand-Written Image Predictions project using the CART algorithm to generate 28X28 grayscale images representing handwritten digits from 0 to 9 integers.
- Utilized regression trees to predict pixel values for 785 trees, resulting in accurate handwritten digit recognition.

### Ionosphere Signal Predictions

*July 2020 - August 2020*

- Implemented KNN, GLM, and decision trees to measure accuracies of 'good' and 'bad' instances in the Ionosphere Signal Predictions project.

### Alcohol Effect – Student Grades

*June 2019 - August 2019*

- Predicted the impact of alcohol consumption on student grades, revealing that alcohol consumption on weekdays reduced the expected average grade from 11.22 to 10.88 and on weekends from 11.19 to 11.17.

## Skills & Interests

**Skills:** Solution Architecture, Data Analysis, Data Science, Information Architecture, Agile, Interaction Design

**Programming Languages:** Python, SQL, R, Shell, Unix, Java

**Databases:** MySQL, Cassandra, Mongo, Postgres, Oracle, Cosmos DB, Apache Hive, S3, RDS

**Big Data :** Hadoop, Pyspark, Apache Kafka, Apache Spark, Elasticsearch

**Machine Learning:** Tensorflow, Keras, Knn, Decision Trees, Neural Networks, Pandas

**Cloud Tech:** AWS EC2, AWS IoT, AWS Lambda, AWS Glue, AWS EKS, BigQuery, Cloud Functions, Google Pub/Sub, Kinesis, Kubernetes, Cloud Trace, Workflow, API gateway, Cognito

**Visualization Tools:** Tableau, Power BI, Amazon Quicksight, Looker, Metabase

**DevOps:** Ansible, Jenkins, Docker, Git, Chef, Puppet, Bitbucket, Terraform, Prometheus, Splunk, AWS CloudFormation

**Dev Tools:** VS code, Jupyter, SQL developer, Anaconda, Eclipse, Postman, Putty, WinSCP

**Interests:** Photography, Outdoor Activities, Learning Tech Content