

# Bharanidharan Sivakumar

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[LinkedIn](#) [Website](#) [Blog](#) [Google Scholar](#)

## Professional Certifications

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AWS Solution Architect, Amazon RedShift- QuickSight SME, AWS(CCP), AI Practitioner, Embedded(FICE)

## Professional Experience (3+ years)

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**Amazon Web Services(AWS):** Cloud Database Engineer, Bangalore, India (Aug 2022 - Present)

- Drove cost optimization for large-scale analytics workloads by recommending optimal compression strategies, table restructuring, and VACUUM tuning, resulting in up to 30% reduction in storage usage and enhanced cluster efficiency.
- Designed and implemented scalable integrations between analytics platforms and external tools such as Tableau and Snowflake, enabling real-time, enterprise-wide data insights and streamlining data pipelines.
- Minimized potential financial losses for over 10 organizations by swiftly diagnosing and resolving critical production outages, restoring workloads within minutes through targeted root-cause analysis and solution deployment.
- Facilitated smooth adoption of cloud-native BI platforms by replicating customer environments, resolving migration challenges, and conducting onboarding sessions—ensuring zero post-migration disruptions.
- Identified and resolved six high-impact product defects, driving roadmap updates and improving service reliability. Strengthened AI-based analytics tooling by validating model outputs against real scenarios, improving accuracy and usability.
- Delivered secure SSO integrations with identity providers like Azure AD and Okta, enhancing cross-platform interoperability and reducing authentication errors across customer-facing environments.
- Created over 10 technical deep-dives and solution documents, boosting self-service adoption and decreasing time-to-resolution. Mentored 20+ engineers across global sites through immersive training and onboarding programs, accelerating domain ramp-up.

**Tata Consultancy Services (TCS):** Network Administrator, Chennai, India (Jun 2021 - Aug 2022)

- Administered and maintained Linux-based systems, ensuring optimal configuration, uptime, and stability across production environments.
- Monitored system performance and resource utilization, executing timely upgrades and tuning to maximize efficiency and prevent downtime.
- Developed and maintained shell scripts to automate repetitive administrative tasks, improving operational efficiency and reducing manual overhead.
- Enforced robust system security measures by implementing policies and controls that protected infrastructure from external threats and vulnerabilities.

**IIT KANCHEEPURAM (IIT DM):** Intern, Chennai, India (Nov 2020 - Jan 2021)

- Contributed to the design and development of digital circuits and systems by applying concepts from logic design, computer architecture, and electronics through research-driven experimentation.
- Gained practical experience with industry-standard tools including Cadence 6.1, Verilog HDL, and Keil, using them to design, simulate, and validate digital hardware components.

## Education

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**Anna University**, Chennai, IN: Bachelor's in Electronics and Communication, Aug 2017 - Apr 2022

## Accomplishments

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- All-Rounder Award Winner for Q3 2024, recognized for delivering exceptional results across technical expertise, customer impact, and team contribution.
- Drove resolution of 1000+ technical challenges, maintaining a 98% positive customer satisfaction rating by consistently delivering high-quality solutions with speed and clarity.
- Recognized with a company-wide excellence award(MVP) for outstanding performance across customer experience, mentorship, and technical innovation.
- Secured 2nd place at the 7th ISTE State-Level Student Annual Convention Project Expo.
- Won Hackathon for proposing a project idea to reduce Redshift Snapshot costs.

## Projects ([Link](#))

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**HOMEDOCTOR –Health Monitoring Prototype:** Designed and implemented a machine learning and neural network-based system aimed at enhancing individual health and safety. The system provides real-time health updates, conducts symptom screening, detects potential health risks, and enables location sharing with nearby hospitals in emergencies. This project leverages AI for proactive healthcare monitoring and rapid response in critical moments.

**OTTO –Voice Recognition Robot:** Developed a voice recognition robot using Arduino Nano, integrating mobility, dance, audio playback, and obstacle detection functionalities. This project focused on creating an interactive and responsive robotic system that enhances user experience through advanced voice control and movement capabilities, ensuring entertainment and safety features.

**VIRTUAL IMAGE CONVERTER –3D Image Conversion Platform:** Created a Python-based platform that converts 2D images into 3D models with mesh surfaces, offering VRML 2.0 (or X3D) export features for 3D color printing. This tool allows users to transform flat images into detailed, printable 3D objects, facilitating advanced design and prototyping for various applications in the 3D printing industry.

**Internal Bot for QuickSight Action Item Tracking:** Developed an internal bot that tracks pending action items in the QuickSight queue, enabling quicker resolution of tasks. The bot's automation streamlines the workflow, helping teams close action items promptly, thus enhancing customer satisfaction and reducing the risk of losing customer sentiment.

## Publications ([Google Scholar](#))

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- AWS KC Article: Troubleshoot issues with VACUUM in Amazon Redshift([Link](#))
- AWS Guide: Configure QuickSight with Java SDK via Maven(Mac OS) ([Link](#))
- AWS Repost: Neptune with IAM DB Authentication and Troubleshooting errors.

## Skills ([LinkedIn](#))

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- Programming: SQL, Python, Powershell, Bash, C, C++, Java
- Cloud and DevOps: AWS, GCP, Azure, Terraform, OKTA
- Tools: Raspbian, Ubuntu Linux, VSCode, AWS CLI, I/O Shields Microcontrollers, RaspberryPi, DataGrip, SQL Workbench, DBeaver
- Competencies: DataZone, VPC, IAM, S3, EC2, Neptune, Grafana, Prometheus, OpenSearch, SageMaker, Bedrock, EntraID