

Arunkumar Muthusamy

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EXPERIENCE

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- Tarka Labs** Buffalo, NY
• *Software Engineer Intern* June 2022 - Aug 2022
 - Built authentication mechanism using Slack OAuth API and JWT in Rust; Reduced user auth management in the service.
 - Sahaj Software Solutions** Chennai, India
• *Senior Software Engineer* May 2019 - July 2021
 - Out-Of-Home Advertising - Inventory Management
 - Spearheaded design and development of facade service across salesforce instances using **Spring Webflux**; Helped client incorporating different salesforce instances to support different media owners.
 - Created a low-latency, event-driven service using **CometD** framework to consume salesforce object changes which reduced the latency by **70%**.
 - Out-Of-Home Advertising - Campaign Optimization
 - Generated quality metrics like churn rate, frequency, etc for one of the audience providers using **Apache Spark**; Improved clients understanding of the impressions quality provided.
 - Developed external audience ingestion feature to generate insights for the provided audience using **Apache Airflow & Apache Spark**; Assisted clients to incorporate custom audience in generating footfall reports.
 - Leveraged Test Driven Development expertise in increasing the test coverage to **90%** for the existing services.
 - Modeled and implemented a **S3 crawler** for the given time period enabling client to acquire footfall reports.
 - B2B Marketplace
 - Developed several micro services using **Spring Boot** in an event driven architecture using **Apache Kafka**.
 - Implemented a chat solution using **MongooseIM** reducing the chat service creation from the scratch for clients.
 - Zoho Corporation** Chennai, India
• *Member Of Technical Staff* June 2016 - May 2019
 - Replaced OpenStreetMap with Google Maps in map report increasing the plot accuracy by **80%**.
 - Utilized knowledge of **SOLID** principles to refactor report module resulting in a modularized codebase.
 - Led and mentored a team to design and develop features of different reports like List, Spreadsheet, Kanban, Map, and Calendar.

EDUCATION

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- The State University Of New York, Buffalo** NY, USA
• *Master in Engineering Science* Aug 2021 - Dec 2022
 - Jeppiar Engineering College, Anna University** Chennai, India
• *Bachelor of Technology - Information Technology* Aug 2012 - May 2016

SKILLS

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- **Languages:** Java, Python, R, SQL, Javascript, C
 - **Frameworks:** Spring Boot, Spring Webflux, Apache Airflow, Apache Kafka, Apache Struts, Junit
 - **Machine Learning:** Apache Spark, PySpark, Plotly, PyTorch, OpenCV
 - **Tools:** PostgreSQL, MySQL, MongoDB, Docker, Kubernetes, Terraform, GIT
 - **Cloud Technologies (AWS):** EMR, S3, Athena, Glue, Lambda, EC2, SQS, SNS
 - **Others:** Data Structures, Algorithms, Problem Solving, Test Driven Development, Microservices

PROJECTS

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- **Course Recommendation System — PySpark, Apache Spark:** Developed a KNN algorithm based on different parameters to find the similar users and suggested courses. Performed the analysis for top 10 frequent users and achieved **70%** accuracy
 - **GSM Arena Data Collector — Python:** Built a data aggregator that collects features about smartphone from GSM Arena for smartphone price prediction which reduced the manual processing by **90%**
 - **Market Basket Analysis — R, Apriori:** Performed RFM analysis, market segmentation and item recommendation using Apriori algorithm on the sales data of a inventory store. Created R Shiny dashboard to visualize the clusters and their properties like recency, frequency and monetary