

## SOURAV DUTTA

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### Skills

- **Programming languages:** Hack/PHP, Python, C#, SQL, Typescript, JavaScript, Scala, C++
- **Technologies:** Terraform, Kubernetes, AWS, React, Docker, Git, Spark, REST APIs, instrumentation and metrics, distributed computing, concurrency, data pipelines, messaging service.

### Experience

**Senior software engineer, Oportun (Digit), Remote, USA, Jan 2023 - present**

- Leading the effort to consolidate and migrate logging and monitoring tools across the company.
- Led the **alert routing** infrastructure to route alerts for services on Kubernetes to different paging systems.
- Deployed **multi-region Terraform** to have business continuity during region failure.
- Added network monitoring of Kubernetes nodes with **Prometheus** endpoint and **Datadog**.
- Ensured SOX compliance of Confluent and Kafka connectors setup with Terraform.

**Software Engineer, Meta Platforms (Facebook), Menlo Park, USA, June 2020 - Jan 2023**

- Worked on two zero to one products (email marketing / marketing messages) to increase customer re-engagement.
  - Worked with React and GraphQL on frontend and Hack (PHP), asynchronous jobs, messaging queues, relational database design on backend.
  - Built multiple **user experience features** for new **email marketing** product including complete business onboarding experience, campaign duplication etc.
  - During this handled design and product alignments, development, logging and testing of the feature.
  - **Architected the message delivery system** which was used for 10k deliveries per campaign. I led the effort to scale it across channels and products. Later the same delivery system was used by three different products.
  - Built the foundation of marketing message campaign insights which was critical to understanding the success of campaigns.
  - **Mentored people** from both within and outside the team with onboarding and career guidance.
  - Managed interns in the team during my tenure.
- Worked on trace analysis tool for developers to process and analyze traces at scale.
  - Wrote several data pipelines to process traces at an hourly and daily cadence. The stack involved working with Scala, Python, Spark and Presto.
  - **Decreased trace loading time in web application by 80%** by implementing a cache mechanism for trace files. As a result, 50% of requests were loaded from cache.
  - Built a system to detect regressions in data pipelines. test pipeline to detect errors before deployment and provide a way to test data for partners.
  - Designed and implemented a system for **1-click debugging** by unifying frontend and backend logs. This provided an easy visualization of logs and errors for a given request.

**Software Engineer II, Globality, Menlo Park, USA, July 2019 - June 2020**

- Worked on a real time data reporting platform. **Decreased** report download **latency** by more than **50%**.

- Laid the **foundation for external API capabilities** with admin and user access levels using OAuth and Auth0.
  - Wrote multiple external facing Globality public APIs to support integration with third party systems.
  - **Built two major integration flows** with SAP Ariba and Coupa.
  - Tech stack included Node.js, Postgres DB, Python and Java services, Rest APIs, OAuth

## **Software Engineer & Software Engineer II, Microsoft, Hyderabad, India, June 2013 - July 2017**

*Bing and Cortana:* Worked on user experience and user log analysis

- Led Cortana Notebook frontend. Developed features and reviewed any change to Notebook. Instrumented user behavior and built a pipeline to analyze the same. Also, improved and maintained **99.9% availability** for Notebook.
- Worked on software designing and developing user experiences such as travel planner, daily planner and Skywalk which is a framework to **render dynamic answers** by minimizing developer efforts to write similar UI.
- Developed experiences for different segments, major ones are shopping, events, sports and tech on Bing and Cortana. Conducted **A/B testing** and shipped to production based on metric.
- Developed tools to improve developer productivity, like cleaning dead localized resources, generating XPath as per Bing standards and **accessibility** testing tool.
- Worked with Typescript and C# on a .Net MVC stack, map reduce queries etc.
- Mentored two interns and helped new hires onboard to the team during my tenure.

## **Education**

- **University of Florida, USA** - MS, Computer Science (2017 - 2019)
- **Heritage Institute of Technology, India** - B. Tech., Computer Science and Engineering (2009 - 2013)