

# Prasenjit Kumar Nag (Joy)

Melbourne, Australia

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## Summary

Current Staff Software Engineer at Zendesk. 11+ years experience specializing in backend development. Super tech-savvy who loves Vim, NixOs and OSX and enjoys working on all layers of the stack. Nurtures growth mindset, believes in deliberate practice and takes every challenge as a learning opportunity. Experienced in converting complex ideas/business requirements into functional solutions using the right tools, following good architectural principles and best practices.

## Skills

<b>Back-end</b>	Ruby On Rails, Resque/Sidekiq, Scala/Monix, Scala/Cats-effect, Dry-rb, Redis, Memcached, PostgreSQL, Laravel, REST API, gRPC
<b>Front-end</b>	Elm, React, Redux, HTML5, SASS, Webpacker
<b>DevOps</b>	AWS, Docker, Kubernetes, Vagrant, CloudFormation, Terraform, AWS CodeBuild, CodePipeline, EMR, Athena, Redshift, Aurora, kafka, ZooKeeper, Chef, Istio
<b>Programming</b>	Ruby, Scala, Dhall, PHP, Haskell, ReactNative, SQL, Bash Script
<b>OSes</b>	OSX, NixOs, Ubuntu, Debian
<b>Languages</b>	Bengali, English

## Experience

### Zendesk Inc.

Melbourne, Australia

#### STAFF SOFTWARE ENGINEER

Mar. 2021 - Present

- Participate and contribute heavily in moving Kafka clusters into K8s
- Participate in architectural discussions with peers
- Mentoring and pairing inside and outside of the team
- Run Kafka training for product engineers
- Participated in on-call schedules to support services built by the team
- Regularly perform code reviews to encourage best practices
- Continue helping others to adopt dhall for type-safe configuration management
- Regularly run sessions for the team on various topics

### Zendesk Inc.

Melbourne, Australia

#### SENIOR SOFTWARE ENGINEER

Mar. 2019 - Mar. 2021

- Played key role in designing and implementing mTLS authentication for Kafka
- Designed and performed Root Certificate rotation of a private CA without downtime
- Placed 3rd in company wide security challenge
- Contributed to development of a mysql data mover
- Collaborated with other teams to implement cross k8s cluster mTLS for a service using Istio service mesh

### Bellroy (TrikeApps was merged into Bellroy in Apr. 2018)

Melbourne, Australia

#### SENIOR TECHNICAL LEAD

Nov. 2017 - Mar. 2019

- Lead EDI (Electronic Data Interchange) integration efforts for multiple high-profile clients.
- Built ETL pipelines for syncing orders from digital marketplaces. Wrote a parser to generate rails migrations from API spec for core business entities of interest to optimize the time spent to build future ETL pipelines.
- Wrote a caching layer for a throttled external API which has saved > 5M API calls (171 days worth of API calls), which has saved systems from being blocked countless times.
- Wrote a Background job throttler which can automatically filter low value background jobs and defer them to next day (while it was running low on external API calls for the day) to be retried automatically so critical business processes could continue running. This saved a lot of tech support time.
- Implemented a generalized shipping alert rules which allowed Logistics to flag shipments that matched certain criterias to enforce better business processes.
- Participated in and heavily contributed to a massive refactoring of a order fulfillment pipeline, following clean architecture practices, which led to the system processing 200K+ background jobs without a single failure on a recent sale spike in 24 hours.
- In an effort to build a CI/CD pipeline on AWS, migrated CI from Travis to AWS CodeBuild. Used AWS CloudFormation to build the stack (including Docker images). It also cut down cost by 70% while also cutting down spec run time for our largest project by several minutes. Also Built an Elm component for internal dashboard to show CodeBuild build statues.
- Leading data migration effort of an undergoing ERP integration project.

## TrikeApps

Melbourne, Australia

### TEAM LEAD

Apr. 2017 - Oct. 2017

- Contributed to creating an internal DSL for specifying shipping rules in primary client's e-commerce store which allowed specifying complex shipping rules.
- Prepared internal systems to be able to work with (with the accounting system integration) a business entity change for primary client.
- Managed 2 other Junior devs, participated in sprint planning and estimation and organized retrospectives.
- Took the responsibility of meeting with Transactions team weekly, and worked closely with them to maintain and support the rapid growth of the business.
- Integrated multiple new digital marketplaces, including automated order fulfillment, settlement/payment report processing etc.

## TrikeApps

Melbourne, Australia

### RUBY DEVELOPER

Apr. 2016 - Apr. 2017

- Upgraded multiple internal apps to Rails 5.
- Added Apple Pay Payment method on primary client's e-commerce store which significantly increased conversion from qualifying Safari users.
- Built a S3 backed drag-n-drop product image management system for primary client's e-commerce store.
- Converted a legacy ruby app into a Rails one for consistency.
- Wrote a data/business validity checker which let others write SQL queries to run periodically and report them on business critical processes without help from tech support.
- Built and maintained a self-hosted analytics platform (Snowplow) for the data analytics team, involved learning about, setting up and maintaining the full stack including AWS CloudFront, Hadoop/Spark jobs, AWS Athena, AWS Redshift. This supported high performance, low overhead batch event processing for all systems.

## Astute Payroll

Melbourne, Australia

### PHP SOFTWARE DEVELOPER

Feb. 2016 - Mar. 2017

- Refactored the document management system from legacy code to S3 backed clean component using Twig templates.
- Refactored payslip rendering service to a domain service which was then used in cli, API and user facing features.
- Wrote a robust regression tester script in PHP which could generate thousands of payslips using old and new renderer and report on differences to build confidence before cutover.
- Worked on third party integrations.

## Adgate Media

Remote

### WEB DEVELOPER

Feb. 2015 - Jan. 2016

- Implemented complex ideas into working solutions using Laravel.
- Used OOD best practices to produce testable functional code.
- Learnt about Unit and functional testing and started following TDD.
- Built a multi-room chat functionality with ReactPHP on the backend and ReactJS on the frontend with Websocket and ZeroMQ (with support for custom commands).
- Added real-time frontend update support via websocket, to deliver critical information without page refresh.
- Built cache decorators with repository patterns to make caching layer transparent.
- Used AWS SQS for background job processing.
- Built a permission system which allowed feature restriction on user level.

## Noobis Inc

Dhaka, Bangladesh

### SOFTWARE ENGINEER

Jul. 2011 - Sep. 2015

- Analysed client specifications and project requirements, and turned them into functional solutions.
- Prepared regular progress reports.
- Updating and Maintaining a large Magento installation including operational maintenance (learnt a lot about linux server administration).
- Developed in-house apps with Laravel and AngularJS.
- Identified and communicated changing priorities and business objectives to other team members and distributed workload.
- Built MVPs for investor presentations.

## Allmoxy Inc

Remote Part Time

### WEB DEVELOPER

July. 2012 - May. 2013

- Added various reports into the existing app which gave more insight into the business.
- Extended the custom MVC the client was using with more features.
- Extended the frontend built with PrototypeJS with more features.
- Created a documentation framework which let the customer support add video walkthrough and in turn saved time on support ticket resolution.

## Leevio Inc.

Remote Part Time

### WEB DEVELOPER INTERN

Dec. 2009 - Jun. 2011

- Learnt about VCS (subversion).
- Contributed to the development of inhouse and client apps.
- Built few mobile apps with Titanium.
- Learnt and used Zend and CodeIgniter PHP frameworks.

## Education

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## Certifications

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### **CKAD: Certified Kubernetes Application Developer**

[See Credential](#)

ISSUED: FEB. 2021

## Tech Talks

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### **Securing Kafka at Zendesk**

[Watch Now](#)

KAFKA SUMMIT 2020

[Confluent Blog Post](#)

### **Securing Kafka at Zendesk**

[Meetup Link](#)

KAFKA MEETUP MELBOURNE

## Relevant Community Services

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### **Quantum Foundation**

*Dhaka, Bangladesh*

MOBILE APP DEVELOPER

*Jul. 2016 - Oct 2018*

- Volunteered to develop a localized Android app (using Java) and an IOS app (using ReactNative) for the non-profit, so people can read their primary religious book offline (with audio recitation). They are on [Google Play Store](#) and [iTunes App Store](#) and being used by many.