

Adesh Nalpet Adimurthy

Software Engineer

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Customer-focused and technically-astute Software Engineer skilled in back-end development with three years of experience. Currently pursuing a Master's degree in Computer Science at Dalhousie University, specializing in Big data and Software Engineering.

Skills

Programming languages: Java, Javascript and Python

Frameworks: Dropwizard, Spring, Django, Flask, Angular, Ionic

Databases: MySQL, MongoDB, AeroSpike, ElasticSearch, Redis, Redshift, Athena

CI/CD: Jenkins, Spinnaker, Docker, Terraform, Gitlab CI, Marathon and Mesos

Others: Git, Docker, Hadoop-ecosystem, Amazon Web Services, RabbitMQ, Apache Kafka

Work History

2022-05 - Current **Google Summer of Code Contributor**

Google OSS, Our World in Data, Halifax, NS, Canada

- Working on building a shape/topology preserved population-scaled world cartogram to better visualize the effect and gravity of metrics such as world hunger and poverty.
- Prototype: <https://www.pyblog.xyz/population-cartogram>

2021-12 - Current **Teaching Assistant and Marker**

Dalhousie University, Halifax, NS, Canada

- Developed lab instructions relevant to the topics covered in the class to put theory into practice in the real world, such as the effect of rounding errors in geometric algorithms.
- Conducted weekly labs and office hours to assist with lab procedures and assignments for a class of 25 students. Followed by marking the assignments with feedback covering areas of improvement and strengths.

2019-12 - 2021-07 **Software Engineer**

PhonePe Private Limited (Acquired by Walmart), Bengaluru, KA, India

- E-Nach (Automated Payment Services):** Developed the Systematic Investment Plan (SIP) feature to schedule automated payments through E-Nach and UPI mandates or set-up reminders for investments, and handle over 3 million transactions per month.
- Know Your Customer (KYC) Verification:** Rewrote KYC submission state-machine for user identity verification by parsing proof documents such as Drivers License, Aadhar Card, and Bank Statements, along with a selfie video verification which reduced false negatives from 4% to 0.3%.

- Platformization: Built a Dropwizard framework to enable dynamic screens with server-driven UI, thereby taking away the need for frequent mobile application releases and extended the project to facilitate A/B testing.
- User Personalization: Developed a lightweight rules engine to evaluate conditions and execute actions based on user profile and activity, resulting in a ~45% increase in conversion to invest in systematic plan schemes.

2018-07 - 2019-12 **Software Engineer II**

Clear (Formerly ClearTax), Bengaluru, KA, India

- Load Test Framework: Developed a framework to capture and replay HTTP traffic at a higher speed in a test environment and published performance results to Grafana and Spinnaker dashboards, reducing the set-up time from >60 minutes to ~10 minutes
- Parallel Test Framework: Reduced test execution time from 65 minutes to ~14 minutes using Jenkins and AWS Spot Fleet with ANT scripts to aggregate test results, reducing deployment time and cost by 10x.
- ETL (Extract, Transform, and Load) Pipeline: Set up a pipeline to combine data across multiple database shards by streaming MySQL bin logs using Kafka, leading to a 60%+ improvement in query-time.
- Database Sharding Bundle: Developed a Java Dropwizard library for application-level horizontal sharding for relational databases, with support for atomicity of transactions, handling nested UnitOfWork, and checkpointing.
- Xander: Built a wrapper around simple workflows (AWS SWF) with a decision layer for APIs to be synchronous or asynchronous, reducing failure rate from ~20% to NIL.
- Licensing as a Service: Developed a service for monetizing and limiting user exploitation of the application utilizing Python Django to float the application and Redis for database caching.

2017-11 - 2018-06 **Full Stack Developer Intern**

Techleet Infosystems, Bengaluru, KA, India

Education

2021-08 - Current **Master of Applied Computer Science**

Dalhousie University - Halifax, NS, Canada

2013-07 - 2017-08 **Bachelor of Engineering: Electronics And Communication**

Visvesvaraya Technological University - Bengaluru, KA, India

Accomplishments

- Successfully completed the Dal Innovates Collide - Exploring Entrepreneurship.
- Won the "Halifax Innovation Challenge, Extra Mile Award" sponsored by RBC and IBM.
- Certified in "Business Communications for Researchers" by Path2Innovation.
- Rated as 'Exceptional Performer' (July 2020 and April 2021) at PhonePe and 'Out Performer (OP)' in the performance reviews at ClearTax (October 2018 and April 2019).