

EDUCATION

University of Colorado Boulder

MS, Computer Science

(focus on Intelligent Systems)

Expected, May 2023 | USA

NIT Trichy

B.Tech, Production Engineering

May 2017 | India

LINKS

- [Linkedin:// gautamtushar](#)
- [Github:// tushar-rishav](#)
- [Stackoverflow:// tushar-gautam](#)

COURSEWORK

Graduate (Fall'21)

- Design and Analysis of Algorithms
- Natural Language Processing
- Machine Learning (*Teaching Asst*)

SKILLS

Programming Languages

• Python • JavaScript • C++

Technology and Platform

- Nodejs • Linux
- Docker • Kubeflow • Kubernetes
- Mesos • HDFS • Ceph
- Kafka • Graylog
- InfluxDB • MongoDB
- Ansible • Git
- HTML

EXPERIENCE

LG Ads | Software Engineer

June 2017 - June 2021 | Bangalore, India

- Joined Alphonso (*named LG Ads after an acquisition by LG*) as the 10th engineer. Endowed with full responsibilities tackling critical scalability problems under the guidance of the Founders. As a TV data company, using its proprietary Automatic Content Recognition (ACR) to recognise Live TV feed in real time, my role was focused on scaling backend ACR services as outlined below.
- Refactored Live-TV feed database cache data structure, in Node.js, to optimise ACR search, providing vertical scaling.
- Redesigned critical Live-TV feed database deployment pipeline to scale across thousands of servers within a sub-second time, providing horizontal scaling.
- Efforts on horizontal and vertical scaling paid off enabling ACR services to scale from couple hundred to a few thousand servers with 5x improvement in latency.
- As a founding member of the Platform Engineering team, led a small team architecting key platform infrastructure projects —log collection pipeline with Graylog and Elasticsearch, application metrics collection and monitoring with Telegraf and InfluxDB, streamlined application deployment with Docker and Kubernetes, High-availability and Load-balancing of critical services with HaProxy and Floating IPs. Also built expertise on Mesos, HDFS and Ceph for managing large scale distributed storage and compute cluster.
- Setup Machine Learning pipeline based on Kubeflow, saving significant developer hours per week for the Data Science team.

Python Software Foundation | Google Summer of Code

April 2016 – August 2016

- Contributed to Coala —static code analysis FOSS—in Python, under Python Software Foundation. Developed "coala-html" application —AngularJS application to display results from Coala, as an interactive web page.
- Incorporated test-driven development with 97% code coverage for AngularJS and 100% for Python codebase, test automation and wrote code documentation as recommended software development practices. [Github/coala-html](#).

Europython | Speaker

July 2016 | Bilbao, Spain

- Conducted a 3hrs training session titled "*Guide to make an open source contribution*", using Git, CI/CD pipeline at EuroPython — an annual International Python Conference in Europe. Participants made real time contributions to coala project. [Slides](#).

Delta Club | Student Software Developer

July 2014 - May 2017 | NIT Trichy

- As a core member of elite programming club, collaborated on maintenance of the University website, development, administration and updating most of the contents on institute intranet.

OPEN SOURCE PROJECTS

- [IGitt](#) and [GitMate](#) (*Contributor, 2016*) —GitMate provides automated code review and issue triaging for GitHub projects. IGitt as a backbone for GitMate, provides REST interface to access git hosting services eg GitHub. Contributed bug fixes and implemented new feature to predict bug rank for incoming patch using bug prediction algorithm BugSpot from Google
- [Code Control](#) (*Contributor, 2016*) —Online game, player writes program in Javascript to control a bot character in 2D grid with attack and defend strategies and defeat opponent player's character to win the game. Game was live during <https://pragyan.org/21/home/> 2016 - annual Tech Fest at NIT Trichy