

Tushar Kant Verma

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SUMMARY

An enthusiastic & passionate Web/Cloud (DevOps) development professional with 9.5+ years (+1 more as part time .Net Trainer) experience. Well suited for **Individual-Contributor** roles, plus a good **team player**. An Engineer who excels at analyzing, prioritizing and completing tasks in a professional manner. Can code in any language but well versed with **PHP**. Can work on any problem, whether it's related to **Frontend, Backend or DevOps**. A good debugger who can understand the whole system by just going through lines of code. Check out my **GitHub** repo to know more on what else I can code!

SKILLS

- Languages Known PHP, Python, Java, GoLang/Elixir (Beginner),
 Bash, JavaScript/Typescript, Node.JS, HTML/CSS, SASS, Ruby
- PHP Based CMS/CMF Drupal 7, Contentful, Contenta
- PHP Based Frameworks Known CakePHP, Symphony, Different Custom Implementations.
- Front-end frameworks: React, <u>Vue</u>, Next.Js
- Other Frameworks: Phoenix, Falcon, Rails 4, Spring Boot
- Other Open Source Technologies GraphQL, Apollo-Client, Absinthe, Redis, Consul/Zookeeper, Beanstalkd, OpenComponents, RabbitMQ, Kafka, Docker, ELK, Node.Js, Elasticsearch, Solr Search, Varnish, OpenLDAP, CURL, Swagger, Git, etc.
- Infrastructure as Code: Docker, Docker-Compose, AWS CDK/Troposphere (Cloudformation orchestrator), Terraform, Terraform-Cloud, Ansible.
- Development Stacks Unix (Mac), Linux (Debian & RedHat Flavors), Apache2/Nginx, MySQL/MariaDB, PHP5/7, XAMPP on Windows (Prefers linux!). Now containerize every other system before working on them.
- Development Tools VSCode, IntelliJ, Sublime Text, PhpStorm, PyCharm, IntelliJ, PhpMyAdmin/MySQL Workbench, Command line Access (Terminal on linux/Unix & Putty on windows), Drush, Artisan, Cake Bake, Mix, golang-boilerplate (for initial dir structure in GoLang), etc.
- AWS Related ELB, EC2, ECS (on Fargate/EC2 cluster [including managed spot instances]), Cloudfront CDN, S3, EFS, Secrets Manager/SSM, ElasticCache, Route53, RDS, VPC, IAM, Lambda @Edge, MSK, AppConfig etc.
- Others Web scraping using curl, Migration (Done while in Chetu from Django to Drupal, deployer/debugger of new Kayako platform).
 More on in my blogs at http://tusharkant.in

EXPERIENCE

Staff Software Engineer, Chegg Inc.

Delhi, India - Nov 2020 - Present

An internal org switch with promotion. In this I am working with different product engineering teams with Arch and Infra related solutions. First target was to move out of legacy stack written in PHP to Next.Js and Node.Js based BFF stack. Now working on real-time data analytics pipelines.

Technologies Used:

- Technologies Used: NEXT.Js (React based framework with SSR support), Node.Js (Apollo GraphQl Server), AWS ApiGateway
- Kafka, KDA (Kinesis)
- More to come!

Sr. CloudOps Engineer, Chegg Inc.

Delhi, India — Aug 2019 - Nov 2020

Made an internal switch lately from product to platform automation, mostly occupied with infrastructure as code stuff. .

Technologies Used:

- Technologies Used: AWS CDK, Troposphere, Terraform, Ansible, Jenkins2, Docker, GitLab+Terraform Cloud
- Optimize Rundeck Pro infrastructure requirements, use IAC, came up
 with architecture for making it much more resilient and maintainable. A
 combo of Terraform(cloud)+Ansible(configs)+Jenkins(CI/CD) used.
- AWS-CDK introduced to Chegg. Used Typescript for managing a
 whole bunch of infra requirements for product, Rundeck as first client.
 But because of its learning curve and Chegg moving more towards
 Terraform we dropped the actual implementation
- Used Terraform at scale, includes import of existing legacy cloud resources and toolings. Later we are now working upon TFC+GitLab implementation for Small-Account-Model philosophy implementation.

Sr. Software Engineer, Chegg Inc.

Delhi, India — Oct 2016 - Jul 2019

Have been working over different FrontEnd related stuff in here. Coded recommendation modules in Node.js published as open-component, for Q&A / TBS pages. Retention ++ & different optimization at different layer like Content Based Router (NGINX), etc. Recently created a BFF layer in GraphQL which utilizes further backend microservices.

Technologies Used:

- Technologies Used: PHP (custom framework), Node.JS, GraphQL,
 OpenComponents (https://github.com/opencomponents/oc) complete
 functional code, HTML/CSS/JS, some JAVA (custom framework called
 Odin)
- AB-Testing and user acceptance.
- All recommended widgets for subscribers were built by me in the last one year
- Chegg's SwaggerHub: API written in Phoenix (Elixir based framework), kinda weekend project by Manager for me.
- Rules engine in Rails, using JSONLogic.

Developer/Architect, Multimedia-streaming site

Aug 2017 - Dec 2017

This is something which I had always wanted to build when I started pursuing my engineering degree. This question has always chatered in my mind, how does big giants do the parsing and data sharing? Hence created to enhance my development|architectural skills. The complete architecture consists of individually scalable microservices. Site's basic components includes:

- **Drupal 7**: Base for handling regular website functionalities
- Beanstalkd: Utilized by Drupal, for local jobs queuing
- CmdStalkd (GoLang broker for beanstalkd): Custom integration with Drupal, avoids long running PHP jobs aka listeners.
- ElasticSearch: For searching assets on the site.
- Falcon (Python based web framework): Created API's to process uploaded video/assets. Includes transcoding, overlaying of promo image, sprite images (scrubber/gallery), thumbnails, preview video, etc. All processing is handled using FFMpeg.
- Node.JS: Public container for making req/responses over web-sockets. Realtime stuff!
- Recommendations: Utilized by drupal's computing module to execute a java based agent (open-source) which computes recommendation on a different cluster.
- Docker: Containerized Drupal, Falcon, ES, Node.js, Recommender services to scale independently.

- AWS: EC2, S3, CloudFront, RDS, Route53, EFS, etc. To keep very minimal and learn more of docker side, I skipped managed ECS and used docker-compose on multiple EC2 instances in different AZs.
- Terraform: Complete setup is terraformed. Here's an example of ElasticSearch setup, terraformed & OpenSourced: https://github.com/tkant/elasticsearch-terraform-ecs

Platform Engineer, Kayako Pvt Ltd.

Gurgaon, Haryana — May 2015 - Sept 2016

Here we (team) had created a whole new micro-service called platform which resides on a server act as master and other slave servers hosts **Cluster** (**Platform** Agent). The communication channel between these master and slave server is **AMQP** (**RabbitMQ**). This whole system is based on Request-Acknowledge fundamentals. Coded in core **PHP** which uses Kayako's **Novo** Framework (Micro-service), it also includes **Python** bins on cluster, GoLang based beanstalkd broker, etc. Worked on **GoLang** based micro-service to read/write zones/nodes in Route53. Also modified a GoLang based broker called cmdstalk to enable processing of jobs on beanstalkd queue. Had also created an Elixir based broker to do the same stuff but management prefered the GoLang based one.

Small talk on **ZooKeeper**: https://prezi.com/p3fea51cnvs8/apache-zookeeper/ https://github.com/sensiolabs/consul-php-sdk : Added contribution to this repo. Created shim classes in NOVO for integrating Consul in Kayako's infrastructure.

More brief details mentioned at:

http://tusharkant.com/2016/09/huh-platform-engineer.html

Technologies Used:

 Technologies Used: Custom PHP Framework (Novo), RabbitMQ, Beanstalkd, Python bins, GoLang (cmdstalk - beanstalkd broker), Redis, RESTful APIs (micro-services), aws-cli, aws-sdk, Consul (had contributed to sensiolabs git repo), NGINX based load-balancing and hosts configuration automation, Dynect, DNS level round-level load-balancing, Chef etc.

Sr. Software Engineer - PHP, Chetu, Inc.

Noida, U.P — Oct 2013 - Jan 2015

Delivered exceptional service by greeting and serving customers in a timely, friendly manner. Collaborated with other team members on special projects and events.

Accomplishments

- Wallmonkeys: Online wall decals store. <u>Technologies Used</u>: Magento, Solr Search.
- KSC-Kreate RT (WallMart): An inventory management application used by "Wallmart". <u>Technologies Used</u>: CakePHP, ElasticSearch, Node.js, Redis.
- KSC-Kreate CPWM/LTD: An inventory management application used by "Cost Plus World Market" & "The Limited". <u>Technologies Used</u>: CakePHP, Elasticsearch, Node.JS, Redis.
- Kanakuk Kamps HT (kanakuk,com): This whole site is solely developed by me! Current site was on Django so for better management client wanted to revamp the whole site in Drupal 7. Right now working over changes/modifications of the same. <u>Technologies Used</u>: Drupal 7, Solr Search, Varnish/Boost.

Consultant - Web Developer (Drupal), The Institute of Mathematical Sciences (IMSc)

Chennai, Tamil Nadu — June 2013 - September 2013

Porting current IMSC website from Drupal 6 to Drupal 7 on Debian 7 (wheezy) environment, using Drupal 7 debian package to make updates easier...

Accomplishments

- Designing custom Drupal 7 theme using Nucleus as base theme
- Created some custom modules.
- Under development.

Linux Admin & Web Developer, Raman Research Institute

Bangalore, Karnataka — September 2012 - May 2013

Established OpenLDAP authentication system and developed joomla based website, which uses LDAP based user authentication.

Created RRI 's first online PHD application form, launched at the end of every year. This whole process was done manually, till I introduced this concept and taken the confidence of stakeholders for building this brilliant site in Drupal.

Accomplishments

- In Depth knowledge of Linux Environment, on bare metal machines.
- Have performed configuration, modification, and addition of schema and management of access control list of LDAP directory.
- Hands on experience with Joomla over live project (rri.res.in). Ported the static HTML site to **Joomla's** dynamic environment. But its still awaiting some internal approvals to go live!
- Created RRI 's first online PHD application form. <u>Technologies Used</u>: Drupal 7, LAMP stack, Drupal Webform and other related modules, FillPDF, etc.

.Net Trainer, Computo Educational Services

Bilaspur, Chhattisgarh — July 2011 - July 2012

Worked as a part time ASP .Net, C# .Net and SQL server trainer in Computo Educational Services Pvt Ltd for 1 year.

Accomplishments

- Trained various students the basics to intermediate level of .NET and its different features.
- Expert in developing windows applications, web applications, windows services and web services in Microsoft Visual Studio .Net IDE using C#.Net, VB.NET,ASP.NET 3.5/4, ADO.NET and SQL Server.
- Worked extensively with Data Adapter, Dataset, Data reader as a part of ADO.NET to access and update database.
- Extensive experience in SQL Server Database design, Database maintenance, developing T-SQL queries, stored procedures, and triggers using SQL Server 2005/2008.

EDUCATION

Dr.C.V.Raman University, Kota, Chhattisgarh
Bachelor of Engineering (Computer Science) — 2008 - 2012
Passed with - 80.02%

Constant **75+** percent scored in every semester.

Topped in 7th semester.

Technical Paper Presentations.

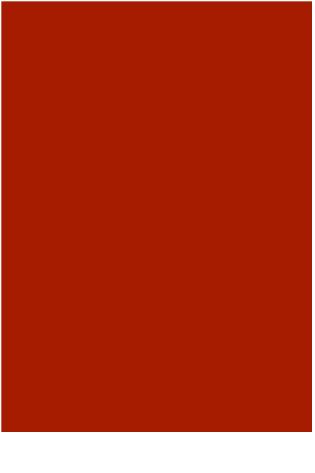
Computer Science HandBall Team Captain.

K.V. Pushp Vihar, New Delhi

10th & 12th — 2006 - 2008

Passed with - 69% and 58.5% respectively

Participated in regional Level Hand Ball competition.



HONORS

- National level paper presentation, organised by IEEE society, entitled as "Emerging Technologies in E-Governance" - Author: Tushar Kant -2010
- 2. National level paper presentation on "Solution to Coverage problems of wireless sensor N/W" **Authors**: Tushar Kant & Omkareshwar Pratap Singh, 2010
- 3. SQL, PL/SQL, Developer 2000, Certification from SECL, Bilaspur, C.G, India 2011
- 4. ASP .Net, C# .Net & SQL Server Certification from Globbussoft Pvt. Ltd . Bhilai, C.G. India 2010

INTERESTS

Programming, Web Developing, Learning new technologies, Playing Guitar, Listening Psychedelic Rocks.

LANGUAGES "I" SPEAKS

Hindi, English & Chhattisgarhi

REFERENCES

Available upon request.