Avalon
INNOVATION

Sumit Tada
SYSTEM DEVELOPER

About

I am a web backend developer with experience in designing and implementing web backend solutions, REST API servers and admin interfaces. Going in the direction of DevOps, I have also managed the cloud infrastructure on AWS and Google Cloud Platform and worked with linux VMs, Docker container and Kubernetes Clusters.
I enjoy working in creating end to end solution that work across different layers and integrate multiple components and devices.

Most proud of

Design & implementation of Volumental Cloud backend

Being the sole backend developer in the team, I designed and implemented a Django based REST API server that provided a management console as well as analytics API for Volumental's fleet of 3D scanners.

AWS to GCP Migration

Moved whole infrastructure of Volumental AB from AWS to Google Cloud that included switching multiple services to their equivalent on GCP while ensuring that end users don't face any downtime.

Expertise

– PYTHON
– DJANGO
– C#
– ASP.NET
– NGINX
– GCP
– AWS
– DOCKER
– KUBERNETES
– ANDROID
– JAVA
– REDIS
– POSTGRESQL
– BIGQUERY
– GSUITE

Methods & Tools

– AGILE
– SCRUM
– KANBAN
– JIRA

Contact

For references please contact:

Emil Hillung, Business Manager
070 454 30 80
emil.hillung@avaloninnovation.com

Projects/Portfolio

2017-2018 Volumental - Kubernetes in production

Role: Backend Developer and Cloud infrastructure administrator
Moved the Volumental Cloud from native Docker based deployment to Kubernetes cluster.
During this migration the service was split into stateless instances and database was moved
Cloud SQL. Continuous deployment was setup using GCP Cloud builder and github integration.
Auto-scaling based on resource usage as well as monitoring using Stackdriver was added.
Tools used: GCP Container Engine, Kubernetes, Docker

2017 Volumental - My.volumental email service

Role: Backend Developer
In this project I created python based service that monitored the storage service for new scans
being sent by the 3D scanners. Once the service detected a new scan, it waited until all the
required media files were received and then triggered the pre-caching system of 3D scan viewer
to provide best possible response time for viewing the scans. Once the data was received and
cached, it sent an email to the end user if the user had chosen to receive it.
Tools used: Python, AWS Simple Email Service, redis

2016 Volumental - AWS to GCP migration

Role: Cloud infrastructure administrator
Migrated Volumental's cloud infrastructure from AWS to Google Cloud Platform. The migration
included moving from S3, Ec2, Route53 and AWS IAM to Google Cloud Storage, Compute engine
and cloud DNS. At every stage of migration care was taken to ensure that end users don't suffer
any downtime or service degradation.
Tools used: AWS, Google Cloud Platform

2016 Volumental – Volumental Cloud

Role: Backend developer and server administrator
Designed and implemented a Django based REST API server that provided a management
console as well as analytics API for Volumental's fleet of 3D scanners. The server received status
updates and statistics from the scanners running in different customer stores spread across the
globe. The management console provided the support staff details of current status of all
scanners as well as interface to send over-the-air software updates to any scanner. The analytics
viewer allowed the managers on customer side to view statistics and trends for their set of
scanners running in various store locations.
Tools used: Django, Python, Linux, Docker, postgres, redis, AWS EC2, nginx

2015 Volumental – GSuite migration

Role: Cloud infrastructure administrator

Moved all the email accounts, groups, storage and access management services to GSuite (formerly Google Apps for business) from Webfaction and Dropbox. I also acted as the IT-admin for settings up and managing access rights of all new user accounts.

Tools used: GSuite (Google Apps for Business)

2015 Volumental – My.volumental Web Service

Role: Backend Developer

Flask based web backend 3D scan viewer allowing Volumental users to view their feet scans from their phones and computers at home after being scanned in a partner store. I created the web backend that interacted with the storage service to pre-fetch media files needed to display a 3D scan and cache it using redis for faster response times.

Tools used: Flask, Python, Linux, Docker, redis, AWS EC2, nginx

2014 Volumental – Corporate website & CMS

Role: Web Developer

Created the Corporate website of Volumental AB using Django based CMS Wagtail. Added support for content team to be able to fully customize different content based on user's device as well as implemeted the templates to display the content with the designs provided by the designers. Also set up the server infrastructure including monitoring, automated backups and continuous integration.

Tools used: jQuery, Django, Python, Linux, Docker, AWS EC2, postgres, nginx

2014 Volumental – Webapp for tablet interface

Role: Web Developer

Implemented AngularJS webapp designed to run on iPad and talk to the local mini-server hosted on the 3D foot-scanners. The webapp provided an interface to start the scans of customer's feet as well as to display the measurements and 3D-mesh of the feet when the scan was completed.

Tools used: AngularJS, Flask, Python

2011-2012 LLS Data AB Oy – Multi-site web-hosting platform

Role: Web Developer

Worked as a part of 3 member team that created the Django based web-hosting system for "PageUp" web hosting service. It supported allowing users to manager multiple websites through multi-tiered admin privilege levels. My main role was adding support for trilingual support for all elements of end user's website and setting up a subscription management service to make it easier to invoice the customers based on features they enabled for their webpages.

Tools used: Python, Django, Linux

2008-2010 Hughes Systique – Firmware update and kernel module

Role: Senior Engineer

Firmware updates of AiReach Wireless Broadband System. A legacy system based on VxWorks realtime OS that controlled the operation of wireless broadband hub. My task was to add support

for monitoring and displaying the bandwidths available to different channels through the CLI interface available to maintenance and support administrators.
Tools used: C++, VxWorks, Unix

2008-2010 Hughes Systique – Firmware update and kernel module

Role: Engineer
Linux Kernel module used for IPV4 to IPv6 protocol translation. This was a showcase project to display the ability to create kernel modules from scratch that provided an option to perform protocol translation at kernel level when dedicated hardware devices were not available and a standard x86 Linux system was used.
Tools used: C, Linux

Tools and Technologies Summary

Cloud platforms: GCP, AWS, Azure, DigitalOcean, Predix

Programming Languages: Python, C#, Go, C, shell scripting

Databases and Data Warehousing: Postgres, Redis, BigQuery

Web fullstack: Django, Flask, nginx, AngularJS, jQuery

Containers & Orchestration: Docker, Kubernetes, GKE

Serverless: AWS Lambda, Google Cloud functions

CI/CD: TeamCity, Jenkins, Google Cloud builder and cloud repository

IT Administration: GSuite, WebFaction

Mobile Apps: Android Java and Xamarin

Dev Tools: git, vim, Jira, Visual Studio

Hardware: Arduino, ESP8266

Certification

Google Cloud Certified Professional - Cloud Architect

Certification Date Apr 2018 – Apr 2020 License: 11481079

Employments

2018-Present Avalon Innovation, Stockholm

System Developer

2014-2018 Volumental AB, Stockholm

Web Backend and Cloud Infrastructure

2013-2014 Sumit E Services Tmi, Turku, Finland

Web backend developer

2011-2012 LLS Data AB Oy, Turku, Finland

Web Developer

2007-2010 Hughes Systique India Pvt. Ltd., Gurgaon, India

Senior Engineer

Education

2010-2013 University of Turku, Finland – Master's degree in Embedded Computing

2003-2007 Punjab Engineering College, Chandigarh, India - Bachelor of Engineering in Electronics and Electrical Communications.

Language

I feel equally at ease in English and Hindi; currently trying to find my way around with basic Swedish.

About Avalon Innovation

Avalon Innovation is a technology and management consultancy within business, systems and product development. We help companies innovate, develop and grow.