



HP PPS Services India Private Limited
No. 24, Salarpuria Arena,
Hosur Main Road, Adugodi,
Bengaluru – 560 030

July 30, 2021

Dear Sir/Madam,

Sub: Letter of recommendation for Vinay Pandhariwal

I am delighted to make a recommendation for Vinay Pandhariwal. Vinay worked on HP's Entitlement and Obligation Management Platform at Bangalore Center of HP Inc. (HP PPS Services India PVT. Ltd.), for almost 19 months. He began here as a Software Developer Intern and continued to serve with increasing responsibilities building new skills, eventually becoming a CW Software Developer with the same team.

During his employment, Vinay proved himself to be a dependable employee and a hard worker with stellar problem solving and technical skills. He is always up and ready for new challenges. I was always impressed by Vinay's ability to complete the work assigned to him on time. Very goal oriented as well as a team player, Vinay was always easy-going. Vinay is smart, energetic, joy to have in office, very devoted and committed. Vinay has majorly worked on the following.

1. Proof of Concept on HP Microservice Acceleration Platform (Powered by AWS).
2. Implemented Redis Cluster, MongoDB as a caching solution by storing whole JSON responses from Source Systems.
3. Developed the async, reactive microservices (Spring Boot) (JAVA Based) performing individual tasks deployable on Netty or Tomcat 9 server.
4. Developed the async, reactive microservices (Flask / FastAPI) (Python Based) performing individual tasks deployable on ASGI or WSGI servers.
5. Dockerized and deployed all the microservice application on HP owned servers managed inside a Kubernetes/Docker Swarm cluster.
6. Developed the logic and deployed an application (Asynchronous) to manage and connect to all the microservices in the cluster.
7. Deployed and managed different tools for functionalities such as Log management, storage and analysis, distributed tracing, api documentation, caching mechanism with Elastic (ELK), Zipkin, Swagger, Redis, respectively.
8. Developed runtime Configuration option and rate limiting for applications without redeployment using Netflix Archaius, PostGre SQL and Bucket4J.
9. Implemented concepts like Bloom Filter to make architecture efficient using Google Guava with Hazelcast and ReBloom (redis Bloom).
10. Deployed and managed HA-Proxy for Redis Cluster, API Gateway and Load Balancing in the cluster.

In closing, I am delighted in making recommendation for Vinay for any position pertaining to software development. Feel free to get back to us for any further clarifications.

Yours truly,
Prachi Jovial
Delivery Manager - Product & Service Operations (HP IT)
prachi.jovial@hp.com
(+91 97415 44919)