Recommendation for CERN Technical Studentship

July 15, 2024

Dear selection committee,

I am writing to enthusiastically recommend Karanjot Singh for the CERN Technical Student programme. As Karanjot's supervisor during his summer student project "Container Object Storage Interface" in the IT-PW group in 2024, I had the pleasure of working closely with him and observing some of his exceptional abilities and positive characteristics firsthand.

Karanjot demonstrated his proactive attitude and inquisitive nature by quickly familiarizing himself with the complex technical topic and environment. He was able to immediately grasp technical and abstract topics from explanations and documentation. When there was something unclear, he was not afraid to ask meaningful follow-up questions to ensure he understood the task and requirements correctly. Following this he also proposed and discussed his own, creative solutions.

On the technical side, Karanjot showed his knowledge and skills on the topics of deploying Kubernetes applications, developing Kubernetes controllers, Go programming as well as utilizing cloud services such as S3. In particular, he investigated how S3 (backed by Ceph Rados Gateway) can be integrated in a cloud-native way with the Kubernetes services offered at CERN. This work benefited the OpenShift Platform-as-a-Service (PaaS) and Kubernetes Cluster-as-a-Service (CaaS) use cases, both of which have thousands of users at CERN.

I was particularly impressed by the fact that he voluntarily contacted upstream software developers and connected with other practitioners from the Kubernetes software industry.

Combined, Karanjot's set of abilities and characteristics led to rapid progress during the project that far exceeded the initial expectations. Karanjot's friendly character made it a joy to collaborate with him and discuss a variety of topics.

Overall, I highly recommend Karanjot Singh for this programme as I am confident that he will excel in whichever project he is selected for. If you require any further information about Karanjot's qualifications or performance, please do not hesitate to contact me.

Sincerely,
Jack Henschel
Computing Engineer, IT-PW
CERN