



July 31<sup>st</sup>, 2019

TO WHOM IT MAY CONCERN

This letter is to certify that Purandhar Chilukuru has worked as an IT Intern for data science within the Execution Technology Business Unit from June 5, 2019 until July 31, 2019. He worked on the below projects:

- Automation of Elasticsearch-Logstash-Kibana infrastructure deployment on azure development environment using terraform, packer and azure virtual machine
- Data analytics of service desk team using Elasticsearch and data visualization using Zendesk explore
- Programmed a document search index using Elasticsearch and Fscrawler

We wish him the best for his future endeavour.

*Puneet Wadhwa*



Puneet Wadhwa  
Informational Technology - Regional Lead