# Kumar Akshay

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# ABOUT ME

Language Python, Ruby, C/C++

Technology/Platform Django, Ruby on Rails, Docker, Kubernetes, AWS, GCP

Open Source Contribution Plone, CPython

MOOC Algorithms, Parallel Programming, Machine Learning, Neural Networks,

## EXPERIENCE

# SDE-1 HackerRank

Jul 2019 — present

- Improved search results of question library by 30%. Later, worked on improving its latency by restructuring API endpoints by 10%.
- Ownership of 3 different services that involve working with different languages and developing/improving features now and then.
- Took initiative in setting up CI/CD on Kubernetes for a new microservice to unblock teammates ahead
  of time while also working on different set of features.
- Leveraged Knowledge: Docker, Kubernetes, ElasticSearch, Ruby on Rails, Python, AWS.

## Mentor

## Google Summer of Code (PSF)

May 2019 — Aug 2019

- Responsibility involves conducting biweekly sync-up, reviewing pull requests, guiding and helping in debugging the problem which student faces along the way.
- Leveraged Knowledge: Rust, Guillotina, Asyncio.

#### Internships

# SDE, Intern HackerRank

 $\mathrm{Dec}\ 2018 - \mathrm{Feb}\ 2019$ 

- Implemented Jaccard-similarity, sliding-window version of Levenshtein-distance and tf-idf to improve the accuracy of an internal tool by 23%.
- Added test case validation API endpoint for all data structures in the code-generator that minimized unintentional errors in test cases of custom questions created by other companies in HackerRank.
- Leveraged Knowledge: Jaccard Similarity, TF-IDF, DSL, Design Pattern, System Design, PHP.

# Participant

# Google Summer of Code (Plone Foundation)

Apr 2018 — Aug 2018

- $\bullet$  Improved unit test coverage by 6.66% and 2% in plonecli and bobtemplates.plone resp.
- Project Report: Plonecli Wiki, also voted as one of the most popular plone package at Plone Conf'18
- Leveraged Knowledge: Python debugger, Unit-testing, Integration testing, Plone development.

# Projects

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## GObject ?

- Implemented a persistence data layer to store transactional objects in rocksDB to reduce memory footprint in <u>Guillotina</u> which communicates using gRPC.
- Used: Rust, gRPC, rocksDB, Python Asyncio, Guillotina.

#### Verify Email ()

- Started this project to experiment with different concurrency in python which ended up becoming a pip package which is being used by many folks.
- Used: Python, Asyncio, Multiprocessing.

## Gensim (Open Source)

- Minimized processing time by 4x in word2vec pipeline after caching common words in dictionary.
- Extended word2vec functionality by implementing smooth-inverse-frequency and tf-idf methods to find sentence embedding which performed better in several evaluation tasks against doc2vec and sent2vec.
- Used: Python generators, decorators, Gensim, API design, Benchmarking Features.

### EDUCATION

# Shri G.S. Institute of Technology and Science

Indore, IN

Bachelor of Engineering in Electronics and Telecommunication

CONFERENCE TALKS

Grad: June 2019

#### Plone Conference 2018

Nov 2018

Gave a talk on GSoC improvements on plonecli in the Plone Conference 2018 held at Tokyo.