

Khandker Maksudul Haque

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Tools & Technologies

- Python
- FastAPI
- AWS
- JavaScript
- PostgreSQL
- Git
- Django
- Celery
- Docker
- Elasticsearch
- Redis

Work Experience

Software Engineer (Remote) — Neliti Pte. Ltd, Singapore

AUGUST 2021 - PRESENT

Neliti (neliti.com) is Indonesia's **largest** user-generated **research repository** with **millions** of monthly users. It is **indexed** by major online libraries including **Google Scholar**.

- Moved **production infrastructure** to **AWS Elastic Container Service** which decreased server cost by **25%** and enabled **zero-downtime** deployments.
- **Automated Deployment** with **GitHub Actions** which made releasing new changes much faster.
- Built **custom domain service** for customers to serve content from their own domain **automatically**.
- Implemented **PDF** file compression with **AWS Lambda** that reduced server load by **15%** and cost by **5%**.
- Revamped **dependency management** with **pip-tools** and **GitHub Actions** removing **90%** manual work.
- Developed **API Version 2** with **role-based permission system** using **Django REST Framework**.
- Fixed **memory leak** and **thread-safety** (pushed a **patch** to upstream **open-source** package) issues.
- Integrated **Stripe global payouts**, allowing Affiliate program users to receive international payments.
- Implemented **Elasticsearch** based search engine for searching articles on neliti.com.

Software Developer (Remote) — The SmartLabs, India

JANUARY 2018 - JULY 2021

The SmartLabs is a firm that provides a **diagnostic test booking service** and builds external **client applications**.

- Built Diagnostic Test **booking** and **online payment system** using **PayTM, RazorPay**.
- Developed an **E-commerce** platform for Pet products with **online payment** and customer **notification**.
- Integrated **Shipment Providers** for **shipping** and **tracking** products that eliminated **95%** manual work.
- Implemented **REST API** with **Django REST Framework** for the **mobile application**.
- Migrated codebase **Python** version from **2.7** to **3.6**.

Google Summer of Code 2019 Student Developer (Remote) — Read the Docs, USA

MAY 2019 - AUGUST 2019

Read the Docs (readthedocs.org) is the **world's largest** documentation hosting service that serves over **55 million** pages per month. **GSoC Project**: <https://blog.readthedocs.com/building-docs-for-pull-requests/>

- Architected a **Continuous Integration (CI) System** for Read the Docs documentation platform which is now used by **thousands** of projects (e.g. Flask, Pytest Documentation).
- Developed a feature to **build documentation** whenever a **pull request** is created and **send build status notification** to the providers' (**Github, Gitlab**) status API.

Open-Source Contribution

[djangopackages.org](https://github.com/djangopackages/djangopackages) (**Maintainer**) (<https://github.com/djangopackages/djangopackages>)

- Migrated legacy templates to **Tailwind CSS**, boosting responsiveness and maintainability.
- Eliminated **N+1 queries** and added **caching**, cutting database load by 4M+ queries/month.
- Boosted **SEO** and social engagement via optimized metadata, sitemaps, and **OpenGraph** support.
- Upgraded to **Python 3.11** and **Django 5** for better security and performance.
- Optimized high-concurrency throughput by migrating to **psycopg3** with native pooling.
- Implemented **PostgreSQL Full-Text Search**, delivering high-relevance results with **fuzzy** matching and weight-based prioritization.

[readthedocs.org](https://github.com/readthedocs/readthedocs.org) (<https://github.com/readthedocs/readthedocs.org>)

- Worked on a **database normalization project** with the **core team** which affected tables with **millions** of rows. **Details:** <https://dev.readthedocs.io/en/latest/design/refactor-remote-repository.html>
- Improved **Elasticsearch Index** and **Search** performance by **15%**.
- Unified and Standardize **Django Settings**.

Ruff (<https://github.com/astel-sh/ruff>): Python linter and formatter, written in **Rust**

- Added **rules** for various plugins such as **flake8-bandit**, **isort**, **flake8-self**, **pygrep-hooks**.

[djangoproject.com](https://github.com/django/djangoproject.com) (<https://github.com/django/djangoproject.com>)

- Improved page performance by **decreasing database queries**.

[django-elasticsearch-dsl](https://github.com/django-es/django-elasticsearch-dsl) (<https://github.com/django-es/django-elasticsearch-dsl>)

- Moved **Test Suite** from **TravisCI** to **GitHub Actions**.
- Added **Django signals**.

Open-Source Projects

[django-newsfeed](https://github.com/saadmk11/django-newsfeed) (<https://github.com/saadmk11/django-newsfeed>): A **Django package** that can be used to create a **news curator** and **newsletter subscription** application.

[redis-search-django](https://github.com/saadmk11/redis-search-django) (<https://github.com/saadmk11/redis-search-django>): A **Django package** that provides **auto indexing** and **searching** capabilities for Django model instances using **RedisSearch**.

[changelog-ci](https://github.com/saadmk11/changelog-ci) (<https://github.com/saadmk11/changelog-ci>): A **GitHub Action** that **generates changelog** using merged pull requests or commit messages.

[github-actions-version-updater](https://github.com/saadmk11/github-actions-version-updater) (<https://github.com/saadmk11/github-actions-version-updater>): A **GitHub Action** that **Updates All GitHub Actions in a Repository** and **Creates** a Pull Request with the Updates.

[drf-test-generator](https://github.com/saadmk11/drf-test-generator) (<https://github.com/saadmk11/drf-test-generator>): A **Django Package** that **generates** basic **unittest** and **pytest** style tests for **Django REST Framework ViewSets**.

Education

Bachelor of Computer Science and Engineering — *International University of Business Agriculture & Technology, Bangladesh*

MAY 2018 - APRIL 2022

CGPA: 3.70 (out of 4)