Mustafa A. Khan III
FullStack Engineer

makman09@gmail.com
makman09.github.io
github.com/makman09
(909)-681-0642

Experience

Senior Full-Stack Engineer @ Technical University of Denmark

Dec 2019 – Aug 2020 // San Diego, CA

Prototyped and productionized a web tool for curating visual network graphs of biological & chemical entities along with their interactions/pathways from large public datasets like NCBI, UniProt, & PubMed and vast research literature.

- Utilized vis.js, d3.js, & RxJS to build a HTML canvas drawing tool for constructing interactive network maps of the pathways/relationships between biological/chemical entities.
- Improve REST API performance by shifting compute intensive tasks from web server worker threads to task queue using Celery.
- Refactored Angular codebase from tightly integrated UI elements that were needlessly duplicated many times in the app with inconsistent styling into a re-usable and composable UI components kit built on top of Bootstrap.

#Angular #Flask #GoogleCloud #d3.js #vis.js #Celery #Bootstrap

Full-Stack Engineer @ Re-Hinged

Jul 2018 – Dec 2019 // San Diego, CA

I led technical development of web apps which utilized data visualizations to communicate business insights and market intelligence.

- Reduced cloud bill for web apps by 30% through refactoring cloud architecture from monolith to that of micro-services. Used AWS Elastic Container Service to orchestrate containers and auto-scale appropiately on reserved and spot instances with discount pricing.
- Built CI/CD pipeline to handle continuous merging and shipping of new app features between multiple developer teams of different time zones while also ensuring few or no bugs escape to production with checks such as unit testing, code linting, and successful compilation.
- Utilized D3.js and Highcharts.js to build data-driven dahboards that are integrated with NLP pipelines to visualize market sentiment reactions around entities such as brands, products, or technologies.

#Django #Angular #AWS #d3.js #ElasticSearch #Python #Docker

Product Engineer @ Guardiome

Apr 2017 – Apr 2018 // San Diego, CA

I pivoted product development of a clinical genome/transcriptome explorer to a collection of omics clinical analysis apps built on top of Omics SDK.

- Collaborated on Omics Software Development Kit's design/implementation which allows developers to build clinical analysis reports around an user's genome and transcriptome.
- Refactored python bioinformatics pipelines into distribute apps developed on top of the Omics SDK.
- Re-designed the UI and impleneted it with Material Design UI components library to allow easier information digestion of genetics insights and analysis.

#React #Flask #Conda #Material-UI #Python #Jupyter

Skills

Languages

Python 3.6+
Javascript ES6+
Typescript
HTML5
CSS3
SQL

Framework & Libaries

#Angular #React #Bootstrap
#D3 #Django #Flask #Redis
#Celery #PyTorch
#PostgreSQL

Tools

#Git #AWS #GoogleCloud
#TravisCI #GithubActions
#Kubernetes #Docker

Knowledge

RESTful Web Services
CI/CD Pipelines
Micro-Services
Data Visualizations
Dev-Ops

Education

UC San Diego

B.S In Computer Science w/ Specialization in Bioinformatics

2012–2017

Projects

David Attenbourgh Text 2 Speech Synthesis

A ML speech model trained from over 20 hours audio of labeled audio transcript to synthesize speech in the like-ness of David Attenbourgh.