

C M KHALED SAIFULLAH

Software Engineer | Application Developer | AI

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EXPERIENCE

Software Engineer

Department of Computer Science, University of Saskatchewan

📅 Nov. 2019 – Present 📍 Saskatoon, Canada

- Lead the development of the Data Management Platform for the Plant Phenotyping and Imaging Research Centre (P2IRC). Work directly with the stack-holders to determine the user stories and maintain the agile, iterative, and incremental approach to implement the features.
- Developed Restful APIs at the back-end, connected OAuth2.0 and CAS based authentication, set up Git, NFS, and Globus Connect server, and facilitated multiple data analysis platforms.
- Explored and designed data model, initial mockups, data access policy, code and API convention, code review, and so on.

Research Assistant

Software Research Lab, University of Saskatchewan

📅 Sept. 2017 – Oct. 2019 📍 Saskatoon, Canada

- Researched and Developed four tools (BigCloneWe, COSTER, COSTERJS, DAMCA) that mined and analyzed source code from Github Repos and tried to solve software engineering problems such as code recommendation, type inference, and so on.
- Maintained and gave support to the largest code clone's golden dataset BigCloneBench that contains over 8 million manually validated clone pairs.
- Collaborated with Post Doctoral Researchers from Queens University and Microsoft in different research projects.

Web Developer

South Asian Youth Society

📅 Feb. 2015 – Sep. 2017 📍 Internet

- Developed and maintained Model SAARC 2015, SAYS Diaries and SAYS Initiatives websites.

Lecturer

Computer Science, Daffodil International University

📅 Sept. 2016 – Aug. 2017 📍 Dhaka, Bangladesh

- Organized and instructed CS courses to 250+ students (Data Structure, Algorithm, Software Development)

SKILLS

Technical Skills

Proficient with: Java Python OOP Flask Apache Lucene

REST Word Embedding Linux Git SQL Agile

Familiar with: TypeScript React Machine Learning Docker JS

Tensorflow Redux Node.js

Soft Skills

Strong with: Leadership Initiative Team Player Public Speaking

Conflict Resolve

PROJECTS

SciDatamanager |Website

- Data management system for storing and sharing scientific research dataset built using Python Flask at back-end, React/Redux at front-end and PostgreSQL for db.
- Implemented Elastic Search, Globus data transfer, dataset versioning using Git, mapping of different data template and so on.

COSTER |Github, Eclipse Plugin, Demo, ASE 19 Paper

- A context sensitive type solver built using Java that finds FQNs of Java APIs from Stack Overflow posts.
- Built the technique and plugin using Eclipse JDT, Apache Lucene, Cosine Similarity, and Levenshtein Distance.

COSTERJS |Github, Talk, SANER 20 Paper

- Built using TypeScript and Python that infers the type of the code element of JS to automate type annotation.
- Apache Lucene, Word2Vec, Cosine similarities were used and outperformed DL techniques.

BigCloneWe |Website, Github, Demo

- Spring Boot application providing evaluation platform for the code clone detection tools.
- Results of code clone detection tools are evaluated and ranked on top of BigCloneBench.

DAMCA |Github

- Built a neural encoder decoder with Python Keras and tf-estimate to recommend API method name and argument(s) for Java.
- Used Eclipse JDT to parse and collect type binding information of the source code, and create dataset for the DL.

EDUCATION

M. Sc. in Computer Science

University of Saskatchewan, Canada

📅 Sept. 2017 - Jan. 2020

Major: Software Engineering

Award: Department Scholarship and Faculty Stipend, 2017-2019

Volunteer Activities: Organized career fair, research poster showcase being the exec. Member of CSGC and GSA rep., exec. member of IEEE North Saskatchewan section.

B. Sc. in Computer Science and Engg.

Khulna University, Bangladesh

📅 Jun. 2011 - Jun. 2016

Award: University Scholarship, 2012-2016, Champion dept. programming contest 2015

Volunteer Activities: Organized CSE FEST, programming contest being general secretary of Computer Club, convener at KU Rag'15 and Bangle new year celebration'14, campus lead of Microsoft Student Partner