

KHEM SOK

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OBJECTIVE

Seeking a high paced working environment and be a part of a progressive organization that will allows me to utilize my flexible skillset as well as to learn and progress as an individual.

EDUCATION

Pennsylvania State University, State College PA

Bachelor of Science, Computer Engineering

Aug 2014 – May 2018

TECHNICAL SKILLS

Programming Languages: Python, Java, Scala, C#, R, SQL, JavaScript ES6+, HTML5, CSS3, C++, C

Technologies: React, Redux, Angular, NodeJS, Spark, Hadoop, Spring, JSP, Servlet, Flask, Docker

Cloud Computing: Azure Machine Learning, Azure Function, Azure Storage, Azure Key Vault, Azure Active Directory, Databricks

Software Skills: VS Code, Visual Studio, Postman, Tableau, Jupyter Notebook, Eclipse, IntelliJ

Database Management System: Microsoft SQL Server, MySQL, Mark Logic, MongoDB

Version Control: GitLab, GitHub, Azure Repo

WORK EXPERIENCE

Machine Learning Engineer, DuPont

Jan 2019 – Present

- Create, design, and implement data science and data engineering pipelines on manufacturing minute and event-based level data from IP21 historian to ingest, merge, transform, clean, perform feature engineering, model implementation, model evaluation, and model reports. Built using a pipeline tool called Kedro.
- Design and implement a web-based application that allows operators to use machine learning models to get recommendations on a manufacturing process. Instantly see increase in production with one week of usage. Built using Flask and Dash with data coming from SQL Server and IP21 historian.
- Create, design, and implement an ETL pipeline for data processing and transformation from machines' raw CSV files to Azure SQL database using Azure Microservices including Azure Function, Azure Storage, and Azure Key Vault
- Build a CI/CD pipeline to automatically build and release services in Resource Group using ARM template as well as deploying microservices such as Azure Function.
- Apply natural language processing algorithm to extract keywords and sentiments from company's annual surveys to better understand employees' takes and produce visualization to easily capture the emotions.
- Research and design time series predictive maintenance models that is able to anticipate machine's failure using the following machine learning techniques, anomaly detection, RNN, LSTM, random forest, and decision trees
- Implement role-based security filter which limit access in Mark Logic database depending on the user's role in Azure Active Directory in Spring MVC and AngularJS stack.
- Implement features in web application including creating dynamically generated form based upon JSON schema, login page, homepage, routing, rest endpoints using React, Redux, React Router, and NodeJS
- Create and design a chatbot that is able to intelligently communicate with users' request built upon Azure Bot Framework with LUIS and QnA Maker in NodeJS and React

Teacher Assistant (C++/Python), Pennsylvania State University

Sept 2015 – Aug 2018

- Assists students with C++ and Python related coursework, formulate end of the year class related projects, grade assignments

MAJOR PROJECTS

Covid19 ([Website](#))

Web application that visualize the statistics of the impact of Covid 19 in different countries.

Travel ([Website](#))

Travel is a fully functioning and responsive web application that allows visitor to create accounts and post their reviews on hotels that they have visited. It features functionality such as posting picture, writing comments, viewing other hotels that have been published by other users, and as well as checking out the exact location of where the hotel is located with the help of Google Geolocation API.

Cancer Detection ([Website](#))

Web application that allows user to upload histopathological slide(s) to predict whether it is cancerous or not. Model was trained upon 80,000 histopathological slides using neural network of 5 layers and able to get a validation accuracy of 87%.

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