

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

University of Michigan, Ann Arbor, MI <i>Master of Science, Data Science</i>	Aug 2020 – Present
Pennsylvania State University, State College, PA <i>Bachelor of Science, Computer Engineering</i>	Aug 2014 – May 2018

TECHNICAL SKILLS

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

Technologies: React, Redux, NodeJS, Docker, PyTorch, NiFi, Spark, Hadoop, Spring, Flask, Nginx, Tableau, Azure DevOps

Cloud Computing: Azure (Function, ML Service, Key Vault, Databricks, Data Lake, Data Factory, etc.) , AWS (EC2, Lambda, RDS)

Database: Microsoft SQL Server, MySQL, Firebase, MongoDB, Mark Logic

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	
▪ 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 with Azure Text Analytics.	
▪ 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	
▪ 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 in Azure DevOps.	
▪ 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	

PERSONAL PROJECTS

❖ RandomThoughts (Link) (GitHub)
Web application that allows users to log in via their Google account to start writing down thought, built with NextJS.
❖ Facial Expression Detector (Medium) (GitHub)
Trained a machine learning model to able to detect facial expression using PyTorch.
❖ FilmLookUp (Link) (GitHub)
Web application that allows users to search up movies and look at the overview, trailer, and etc using ReactJS.
❖ Deploy ReactJS and NodeJS in AWS EC2 with Docker and Nginx (Medium) (GitHub)
Guide on how to deploy ReactJS and NodeJS application in AWS EC2 with Docker and Nginx.
❖ Covid19 (Link) (GitHub)
Web application that visualize the statistics of the impact of Covid 19 in different countries using ReactJS

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