Syed Rizvi

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EDUCATION

College of Natural Science and Mathematics, University of Houston, TX
Bachelor of Science in Computer Science **May 2023**
Cumulative GPA: 3.97, Major GPA: 3.9

EXPERIENCE

HULA Research Laboratory, Houston, TX **September 2020 - Present**
Computer Vision Research Assistant

- Coauthored research paper proposing MorphSet, a novel neural network architecture for case-level renal disease classification (paper accepted at MICCAI, pending press)
- Delivered oral abstract on MorphSet architecture and significance to 90+ medical professionals and AI researchers at the 2021 AI in Nephropathology Workshop in Amsterdam
- Developed custom labeling interfaces using React and the Labelbox SDK, allowing for rapid fine-grained annotation of medical images across 6 labels and 9 sections (805 images fully annotated)
- Delivered presentation on custom labeling schemes using LabelBox platform to the computer vision research group at the University of Buffalo, NY
- Experimented with data augmentation algorithms on nephropathology image datasets
- Wrote Python scripts for image tile extraction from kidney biopsy whole slide images, assisting in the development of a 2,442 medical image dataset

Phillips 66, Houston, TX **May 2021 – August 2021**
IT Intern (Natural Language Processing)

- Worked in an Agile Kanban DevOps team environment to develop tools for document cognition
- Wrote Python scripts to process and clean text from 254 contract agreements, resulting in a dataset of 2,717 text segments
- Trained and deployed domain-specific entity recognition models on AzureML cloud services, identifying 6 contract entities within unstructured text and reaching 87% overall model precision
- Created a blob storage-triggered Azure Function App to consume deployed model endpoints in order to process and score entire contracts within 12 seconds
- Conducted text classification experiments for document categorization based on contract clauses
- Applied Microsoft Form Recognizer tool to analyze product scheduling documents
- Developed exploratory data visualization dashboards on machine status datasets during Alteryx and Tableau training sessions
- Delivered NLP project presentation to IT leadership members and Data Science team at Phillips 66

Taipei Medical University, Taipei, Taiwan **March 2021**
Data Analyst Intern (Remote Work)

- Processed and merged wearable device data measurements taken from 18 Taiwanese patients using Python data management libraries
- Performed correlation analysis and visualizations between physical activity, circulation, fatigue, and sleep measurements taken over 9 months
- Explored time-lag cross correlations among patient data measures

INDEPENDENT PROJECTS

AWS Lex Bot Generator **January 2021**

- Chatbot generation pipeline aimed at automating AWS Lex chatbot creation

- Helped configure AWS Lambda triggers to automatically start chatbot build process when a configuration file containing dialogue specifications is submitted to the app
- Placed 1st overall in the 2021 HP & AWS Bot-a-thon competition
- Developed using AWS Lex, Lambda, S3, DynamoDB, and React

Autoencoder Anomaly Detection **August 2020**

- Machine learning model developed for anomaly detection in environmental sensor data taken from Amazon's Seattle Sphere conservatories
- Placed 3rd in the AWS & NVIDIA Environmental Hackathon ($3000 award)
- Developed using AWS Sagemaker, Python, Pytorch, and Jupyter Notebooks

NutrientView Mobile App **July 2020**

- Nutrient logging mobile app utilizing image recognition to track consumed meals
- Daily progress meters for 25 macro and micronutrients displayed on home tab
- Micronutrient Q&A chatbot integrated to give users insight on different nutrients
- Developed using React Native, IBM Watson image recognition, Azure bot service, Firebase,
- and the Edamam Nutrition Analysis API

StormReady Mobile App **May 2020 – June 2020**

- Hurricane awareness mobile app aimed at preventative storm preparation and educating users about hurricane risk factors
- Implemented a location monitoring alert system with push notifications
- Developed using React Native, Firebase, and the AerisWeather API

TECHNICAL STRENGTHS

Libraries:	Pytorch, Keras, Numpy, Pandas, Scikit-learn, Jupyter Notebooks
Programming Languages:	Python, R, MATLAB, C++, JavaScript, Java
Cloud Services:	Azure ML, Azure DevOps, AWS Sagemaker
Data Processing Software:	Alteryx, Tableau

CERTIFICATIONS

Machine Learning **February 2021**

Stanford University, Coursera Online Course

- Supervised and Unsupervised Learning Algorithms
- K-Means clustering, PCA, machine learning pipelines

Data Science Tools **June 2021**

IBM, Coursera Online Course

- Python, R, SQL, Jupyter Notebooks
- IBM AI cloud service platform

HONORS AND AWARDS

Dean's Distinguished Scholars List, The University of Houston **Fall 2019 – Spring 2021**

ACTIVITIES

Management Information Systems Student Organization **January 2020 – Present**

Professional Development Committee Member

- Worked with a teams of 20+ committee members to perform 75 individual resume reviews leading up to recruiting season following resume guidelines set by the C.T. Bauer College of Business
- Delivered presentation on IT candidate development to over 50 undergraduates at a professional development workshop