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**
Machine Learning Research Assistant

- Coauthored research paper proposing MorphSet, a novel neural network architecture for case-level kidney 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 12 renal disease indicators (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 image dataset

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

- Operated in an Agile Kanban 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
- Developed 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
- Created data visualization dashboards on machine status datasets using Alteryx and Tableau
- 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 the AWS Lex chatbot creation process
- Lead presentation and demo preparation efforts within a team of 4 students, resulting in a

1st place finish among 20+ teams at the 2021 HP & AWS Bot-a-thon competition
- Configured AWS Lambda triggers and wrote first configuration file outlining chatbot dialogue flow according to the competition specifications for customer service
- Developed using AWS Lex, Lambda, S3, DynamoDB, and React

Autoencoder Anomaly Detection **August 2020**
- Trained an unsupervised autoencoder machine learning model on environmental sensor data taken from Amazon's Seattle Sphere conservatories
- Wrote evaluation functions to flag anomalies based on mean absolute error of data reconstruction
- 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 services to track consumed meals
- Created daily intake progress meters for 25 macro and micronutrients displayed on home tab
- Integrated an Azure Q&A chatbot to provide interactive feedback about different nutrients
- Developed using React Native, IBM Watson image recognition, Azure bot service, Firebase, and the Edamam Nutrition Analysis API

TECHNICAL STRENGTHS

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

CERTIFICATIONS

IBM Data Science Specialization **August 2021**
IBM, Coursera Online Specialization
- Data Analysis, Processing, and Visualization using Python libraries
- Machine learning model development and evaluation using Scikit-learn

Databases and SQL for Data Science with Python **August 2021**
IBM, Coursera Online Course
- SQL querying, Relational Database basics
- Managing Database instances on IBM cloud platform

Machine Learning **February 2021**
Stanford University, Coursera Online Course
- Supervised and Unsupervised Learning Algorithms
- K-Means clustering, PCA, machine learning pipelines

HONORS AND AWARDS

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

ACTIVITIES

Management Information Systems Student Organization **January 2020 – Present**
Professional Development Committee Member
- Worked with teams of 20+ committee members to perform 60+ resume reviews per semester 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