Syed Rizvi

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RESEARCH INTERESTS

Graph Neural Networks, Convolutional Neural Networks, Spatiotemporal modeling

EDUCATION

College of Natural Science and Mathematics, University of Houston, TX
Bachelor of Science in Computer Science **December 2022**
Cumulative GPA: 3.97, Major GPA: 3.9

Relevant Coursework: Fundamentals of Artificial Intelligence, Data Science I, Multivariable Calculus, Software Design.

RESEARCH EXPERIENCE

HULA Research Laboratory, Houston, TX **September 2020 - Present**
Undergraduate Researcher

- Advised by Dr. Hien V. Nguyen, ECE Department
- Currently researching image data augmentation techniques using Convolutional Neural Networks
- Contributed to the development and implementation of sampling methods used in the MorphSet research project, representing a biopsy case as a set of sampled compartment crops
- Developed and deployed two custom LabelBox image annotation interfaces using React, allowing for rapid labeling of 12 different renal disease indicators (805 images fully annotated)

PUBLICATIONS

- Cicalese, P.A., **Rizvi, S.A.**, Wang, V., Patibandla, S., Yuan, P., Zare, S., Moos, K., Batal, I., Clahsen-van Groningen, M., Roufosse, C. and Becker, J. "MorphSet: Improving Renal Histopathology Case Assessment Through Learned Prognostic Vectors". *International Conference on Medical Image Computing and Computer-Assisted Intervention.* Springer, Cham, 2021.

PRESENTATIONS

- MorphSet Project Oral Abstract, 2021 AI in Nephropathology Workshop in Amsterdam
- Natural Language Processing and Entity Recognition Models, Phillips 66
- Custom Image Annotation Interfaces using LabelBox, University of Buffalo Computer Vision Group

AWARDS AND RECOGNITIONS

- Incoming Software Development Engineering Intern at Amazon, Summer 2022
- Provost's Undergraduate Research Scholarship, University of Houston, Spring 2022
- Dean's List, University of Houston
- First prize in the 2021 HP & AWS Bot-a-thon
- Third prize in the 2020 AWS & NVIDIA Environmental Hackathon

INDUSTRY EXPERIENCE

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

- Trained domain-specific entity recognition models on land exchange agreements, identifying 6 contract entities within unstructured text and reaching 87% overall model precision

- Deployed models to AzureML Cloud Platform and developed an automated Azure Function App to run preprocessing and inference on contract documents at test time within 12 seconds

Taipei Medical University, Taipei, Taiwan **March 2021**
Data Analyst Intern (Remote Work)
- Performed data processing, correlation analysis, and visualization on wearable device data measurements taken from 18 Taiwanese patients

INDEPENDENT PROJECTS

AWS Lex Bot Generation Pipeline **January 2021**
- Wrote configuration files outlining chatbot dialogue flow according to the competition specifications for customer service interaction
- Lead presentation and demo preparation efforts among a team of four students, resulting in a 1st place finish among 20+ teams at the 2021 HP & AWS Bot-a-thon competition

Autoencoder Anomaly Detection **August 2020**
- Trained autoencoder models to reconstruct environmental sensor data for anomaly detection
- Placed 3rd in the AWS & NVIDIA Environmental Hackathon ($3000 award)

CERTIFICATIONS

- Machine Learning, Stanford University on Coursera
- Data Science Specialization, IBM on Coursera

SKILLS

Programming Languages:	Python, C++, R, MATLAB, SQL, JavaScript
Libraries:	Pytorch, Scikit-learn, Pandas, Numpy, Jupyter Notebooks
Tools:	Parallel programming, HPC job scheduling, Git

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

REFERENCES

Hien Van Nguyen
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University of Houston, Department of Electrical and Computer Engineering
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