Seohee Yoon

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| 470-838-2401| [akheyn029@gmail.com](mailto:akheyn029@gmail.com) | Atlanta, GA | <https://syoon029.github.io/> |  |
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Education

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| **Georgia Institute of Technology** | **Atlanta, Georgia** |
| Bachelor of Science in Computer Science  Master of Science in Computer Science  GPA: 3.72 - Dean’s List | *Jan 2022- May 2024*  *Aug 2024 - Dec 2025* |

Experience

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| **Data Driven Education, Georgia Institute of Technology** | **Atlanta, Georgia** |
| *Research Assistant (Data Scientist)* | *Aug 2022 – Dec 2023* |

* Collaborated with a team of 7 to help instructors and academic departments develop effective assessments
* Identified the level of difficulty for the actual assessment from the dataset based on the Depth of Knowledge (DOK) framework utilizing Python, Google Colab, and Term Frequency - Inverse Document Frequency (TF-IDF) algorithm
* Designed a dataset for training Regressor for Difficulty and Discrimination Estimation model to predict problem DOK level
* Evaluated various algorithms (Random Forest, Decision Tree, Support Vector, Linear Regression, Ridge Regression) for optimal model using scikit-learn library
* Expanded testing data in the dataset from 50 to 900 data leveraging problems from various subjects
* Reduced mean absolute error about 50% using random forest than support vector algorithms with more data

Projects

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| **Respiratory Diagnosis Assistant** | *Feb 2024 – May 2024* | *September 2023* |

* Developed an automated lung sound classification Web using machine learning, improving accuracy from 70% to 83% through data augmentation and a GRU model
* Managed complex data structures with MongoDB and Amazon S3, integrating with Django for database operations
* Enabled predictive diagnostics and streamlined workflow for healthcare professionals by providing instant access to relevant audio samples and patient information

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| **Stock Market Prediction Project** | *Feb 2024 – May 2024* |

* Predict stock price changes using several machine learning algorithms such as Support Vector Regression, Linear Regression, and LSTM
* Evaluate linear regression models using K-fold cross-validation, resulting in 95% accuracy in prediction
* Visualize prediction results from various models and compared each accuracy using tableau

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| **Scene Recognition with Deep Learning Project** | *Nov 2023* |

* Developed a convolutional neural network (SimpleNet) with 2 convolution layers which aligns with given training dataset using PyTorch
* Implemented data augmentation techniques, normalization, and regularization to improve training accuracy and validation accuracy by 30% of the network
* Enhanced pretrained resnet from pytorch's API by modifying layer of model to get a testing accuracy of 85%

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| **Database Application Project** | *Sep 2023 – Dec 2023* | *September 2023* |

* Designed an Extended/Enhanced Entity-Relationship Diagram (EERD) based on the provided requirements
* Created a set of Relational Schema and SQL Physical Schema based on a provided EERD, transformed and uploaded a provided dataset into the desired database
* Developed the SQL views, queries and transactions needed to support an application based on a provided database and dataset

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| **Campus Discovery Service Project, Atlanta** | *Aug 2022 – Dec 2022* |

* Collaboratively engineered a Campus Discovery Service Application with a team of 5 within an Agile framework comprising 6 sprints
* Designed user interface and user experience for five iOS application screens, employing JavaScript and React Native
* Utilized version control systems and enhanced team collaboration by integrating and consistently using GitHub for code management and project tracking

Skills

Python, Java, MySQL, Git, NumPy, Pandas, C#, Assembly Programming, C, React, Tableau, JavaScript, React Native