RAJ ARYAN SINGH

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Education

University of Wisconsin-Madison
Expected May. ’23

Bachelor of Science in Computer Science and Data Science, Minor in Entrepreneurship

• GPA: 3.7 / 4.0 [Dean’s List Award]

Relevant Coursework:

• Advance programming in Java, Data programming with Python, Machine Learning, Web and Visualization with Python libraries, Calculus and Analytical geometry, Discrete Math, Data Modeling, Machine Organization and Programming.

Professional Experiences

AI Developer
Nov. ’21 — Ongoing

Department of Human Oncology, UW Health

• Developing MATLAB and AI based clinical tools for radiation therapy treatment to improve quality and efficiency.

• Compiling CT images, contours, and treatment plans of 300+ patients using MIM Maestro and Python to develop an auto-contouring tool for female breast cancer treatments with at least 85-90% accuracy for clinical use.

• Computing key features for each volume of interest that include first order statistics from contoured clinical cases.

Undergraduate Teaching Assistant
Sep. ’21 — Ongoing

CS 220 (Introduction to Data Programming), University of Wisconsin-Madison

• Mentoring and teaching basics of data programming from scratch using Python to a class of 1,000 students.

• Troubleshooting problems in office hours and lab sessions, guiding the students through the debugging processes.

• Design, verify, and refresh data visualization, plotting and data processing projects and exams for the course modules.

Data Science Intern
May. ’21 — Aug. ’21

Intellio Consulting

• Implemented and deployed to production, a real-estate image classification model using EfficientNetB5 to classify images posted with listings for better accessibility for the users, with an accuracy score of ~90% on 6 different classes.

• Built models to extract keywords from listing texts using NLP techniques, and analytics for the customer marketing team.

Skills

• **Platforms**: Linux, macOS, Windows, Web, Arduino, Git, Google Cloud Platform.

• **Languages and Frameworks**: Java, Python, C, R, HTML, CSS, SQL, MATLAB, Matplotlib, Scikit-learn, Flask, JavaFX.

Selected Projects

Course Lookup
May. ’21

• Developed and designed an application for UW-Madison subject/course lookup based on the cleaned and processed data (collected from the registrar's office), with a command-line arguments, and a simple GUI implementation version.

Life Expectancy Prediction
April. ’21

• Predicted life expectancy rates in different countries using supervised and unsupervised machine learning models (using scikit-learn library) with a r2 score of 0.825, trained on 19 features (economic, mortality, social, etc.) from WHO’s dataset.

Wisconsin Land Use
March. ’21

• Trained Machine Learning models to predict land development in Wisconsin based on nearby land type (water, forest, agriculture, etc.) with an average mean score of 0.79 upon doing an 8-fold cross validation on the r2 score and produced a map animation depicting the predicted development i.e., the city changing over time from 2001 to 2016.

Extracurriculars

President, Founder
June. ’21 — Ongoing

North American Association of Indian Students, UW-Madison

• Founded and established the UW-Madison chapter of the North American Association of Indian Students.

• Fostering a digital and physical community of young Indian professionals located in the United States of America.

Member of Administration Advisory Board
Oct. ’21 — Ongoing

Wisconsin Union, Madison

• Serving as a voting member of the council that makes decisions regarding policies for the Union and budget approval.

• Addressing hiring shortage issues and developing a new mobile application for food delivery for the Union restaurants.