ADITYA RATHOD

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EDUCATION

The University of Texas at Dallas ***May 2023***

Bachelor of Science in Computer Science; Part of Collegium V Honors Program

- Awards: National Merit Scholarship (1 of 8000 students nationwide), 2019-2023
- Coursework: Discrete Math for Computing I, Computer Science II (C++), AP Computer Science (Java)
- Activities: Member of Association for Computing Machinery, Artificial Intelligence Society, Codeburners

SKILLS

- Python with Pandas, NumPy, Keras/TensorFlow, for basic data processing and analysis
- Basics of Machine Learning (Regression, Decision Trees), Deep Learning (basic FCNs, CNNs, RNNs/LSTMs)
- ReactJS web development with React-Router & Redux
- Hands-on experience with Octave, Java, JavaScript/NodeJS

PROJECTS

Liform — Medical Bill Transparency (HackRice 9.0) *devpost.com/software/liform*

- Built web application in a team to promote transparency in medical billing. Users can upload medical bills, and hospitals can upload per-procedure average costs. Allows patients to compare procedure costs across providers.
- Built over 36 hours at a hackathon using ReactJS for frontend, NodeJS/Express/MongoDB for the backend. Implemented data pipeline to ingest hospital charge master data, grouped by Diagnosis Related Group (DRG)

Mushroom Classification Decision Tree *github.com/applecrazy/mushroom-decision-tree*

- Implemented a multi-branched decision tree model from scratch using Python/NumPy
- Trained on the UCI Mushrooms Dataset, achieved 100% accuracy on the test set

Credit Card Fraud Detection *github.com/applecrazy/fraud-detection*

- Utilized Kaggle dataset of transaction attributes and fraud labels to develop neural network based classification model using TensorFlow and Keras
- Achieved 99.94% test accuracy, with F_1 score of 0.81, learned how to deal with skewed data

FLEX *github.com/applecrazy/flexapp, flexapi*

- Developed/deployed Vue.js web app for high school office hours scheduling; 80 recurring users at peak
- Developed NodeJS + Express based REST API to interface with existing database

WORK/RESEARCH EXPERIENCE

Research Intern ***Aug. 2019 – Present***

Polycraft World, Center for Engineering Innovation, The University of Texas at Dallas

- Assisting in development of an AI training environment generation tool for researchers as part of lab's participation in DARPA's SAIL-ON initiative, utilizing Java and collaboration tools such as Github, Microsoft Teams, SharePoint, and JIRA

Undergraduate Researcher ***Jun. 2019 – Aug. 2019***

Clark Summer Research Program @ The University of Texas at Dallas

- Learned machine learning and deep learning concepts, from data cleaning/processing to model creation
- Implemented Sequence-to-Sequence model for abstractive news summarization in Keras/TensorFlow
- Scraped news websites using Python Requests/BeautifulSoup to compile a novel dataset of 25,554 articles
- Presented findings at poster symposium with university staff, department leaders, and faculty in attendance

Robotics/Programming Instructor ***Jul. 2017 – May 2019***

Impressive Minds Academy

Instructed class of 12-14 students aged 8-13 in robotics, programming, and game development. Taught the basics of LEGO EV3, introduced programming concepts through Scratch and Python.